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ORIGINAL ARTICLES.

TREATMENT OF ASIATIC CHOLERA.*

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SPASMODIC cholera—called also malignant, epidemic, Asiatic, Indian, blue and pestilential cholera—is generally epidemic, though not contagious. The first symptoms are generally experienced during the night, sometimes beginning with a light general uneasiness and moderate diarrhœa; at other times the symptoms come on violently and follow each other rapidly. In fatal cases death usually occurs at some period between six and twenty-four hours; in a few fatal cases the patient lingers two or three days. The ordinary course of symptoms are more or less diarrhœa; the discharges at first feculent, but soon presenting the appearance of rice-water or gruel; there are flying pains, or sense of coldness in the abdomen, as if purgative medicine were about to operate; the countenance is pale; there is nausea, vomiting, prostration of muscular power, and nervous agitation; cramps in the legs, arms, loins and abdominal muscles, more or less severe; small, weak pulse, intense thirst and urgent desire for cold water; in most cases cold, clammy skin; all these symptoms may appear successively or almost simultaneously. In some cases the premonitory symptoms exist for eight or ten days; and sometimes the patient is prostrated at once. When the disease comes on suddenly the cramps usually begin in the fingers and toes, rapidly extending to the trunk; the eyes are sunken and surrounded by a dark circle; there is vomiting and purging of white matters mixed with flocculi; the features are sharp and contracted; the expression of the countenance wild and confused. The face, extremities, and often the whole surface of the body, manifest a varying intensity of a leaden, bluish or purplish hue; the extremities shrunken, the nails blue, the pulse thready or wholly imperceptible at the wrist, arm, axilla, temple or neck; there is great restlessness, incessant jactitation, severe pain in the epigastrium, loud moaning or groaning, difficult and oppressed breathing; difficult inspiration, with short and convulsive expiration; voice hoarse, whispering, or nearly suppressed and plaintive; the tongue is white, cold and flabby, and the external temperature often sinks below 80 degrees; convulsions recur at short intervals, or a constant tremor exists. The secretions of bile, saliva, tears and urine are entirely suppressed, and a cadaverous odor exhales from the body. The patient retains his faculties to the last.

Some of the symptoms may be disproportionately severe, or may be entirely absent. Those usually regarded as pathognomonic are: Watery dejections, blue appearance of the countenance or surface, thirst, coldness of the tongue, and pulselessness at the wrist.

The foregoing description of the symptoms of cholera is indicative of the nature of the disease calling for human aid. The time in which to treat the patient sick with cholera is exceedingly limited. What is to be done must be executed with rapidity. There is not a moment to lose between the time when the patient is first seen and the accomplishment of severely practical efforts. Many wise theories may be promulgated, but there are few practical measures that will avail against Asiatic cholera. The experiences during the cholera epidemic of 1892 in Europe, both in Russia and Germany, produced in me a profound conviction that, for the most part, remedial agencies that have been used are of questionable utility. Nearly every prominent remedy proposed and tried has been found to end in greater or less disappointment. Years ago, great reliance was placed upon the far-famed "mild chloride of mercury." Twenty and ten years ago this remedy was given in large doses. Three years ago, during the latest epidemic, small doses prevailed. Next to this, the synthetic drug salol, the product of the laboratory of the Imperial Institute of Experimental Medicine in St. Petersburg, was the most widely used and the most favorably received. Professor Nenski, the originator of salol, personally informed me that the value of the drug could not be seriously recommended as of much importance, but that it perhaps answered the requirements as far as any drug could answer, in the hands of his colleagues. Widely circulated and various reports, enthusiastically commending and moderately commending this remedy, were received by the Professor in St. Petersburg, but he himself was silent as to its efficacy. The far-famed and seemingly unmatched drug, quinine, has been used, and has been held as a dazzling gem before the eyes of the profession by some of our best men, who believe that cholera is analogous to malarial disorders, and consequently the medicine which occupies the position of keystone in the arch, for malarial treatment, is a remedy suitable to contend with the rapid and desperate symptoms of Asiatic cholera. Quinine has a stout advocate in our own country, in the person of a well-known professor in one of the Ohio medical colleges. It was not used, to my knowledge, in the treatment of cholera during the last epidemic in Europe.

* Read in the Section on Practice of Medicine, at the forty-sixth annual meeting of the American Medical Association, at Baltimore, Md., May 7–10, 1895. From the *Journal* of the Association.

A remedy was brought to Hamburg during the latter part of the epidemic of 1892, by the representative of an English syndicate, who posed as a chemist, not a physician. His remedy was a preparation of iodine, to be administered through the mouth. He called the medicine a periodate, and made some experiments upon patients in one of the cholera hospitals in Hamburg. His remedy, however, was not favorably entertained by the medical authorities in charge of the cholera patients, and whatever claims were reported came through the interest of a friendly correspondent of one of the Hamburg weekly secular papers. To show how misleading some of our supposedly authentic information often is, it is only necessary for me to refer to the report given in the "Year Book of Medical Progress," published in Philadelphia. Of all the progress made, of all the combined investigations during the entire epidemic of cholera throughout Europe in 1892, and there was an immense amount of original investigation and great effort made to discover a remedy, the curious spectacle in the Year Book, which alone refers to the remedies brought by an agent of a syndicate from London to Hamburg, at the closing of the epidemic of cholera, shows that there are some things in our profoundest medical publications that are to be taken *cum grano salis*. Uretin was extensively used hypodermically for its alleged influence upon the secretions of the kidneys, upon the ground that the kidneys were to be aided by irritating them to greater functional activity to eliminate morbid elements through the urine. The result of many investigations recorded in Russian practice show that this drug is not to be commended. Digitalis was used, supposedly to benefit a weak heart. This remedy, if at all useful, could be little more than palliative. The use of acidulated water was extensively employed in different hospitals in Europe as a drink, but not prescribed as a remedy. The water was acidulated with HCl and $H\ SO_4$. Subcutaneous injections of salt water were made. The proportion of salt was one-half of one per cent., and the amount of salt water injected subcutaneously was sometimes as much as a quart at a single injection. In one instance, during an illness of several days, as much as thirteen quarts was subcutaneously injected into the cellular tissue, principally that of the abdominal wall. This process of subcutaneous injection was known as hypodermaclysis. The purpose of the hypodermaclysis was to maintain the volume of the blood. The diminished volume of the blood is directly the result of the waste of its liquid portion of serum into the alimentary canal. In this serous discharge, flakes of intestinal mucus gave the name of "rice-water discharges" to the bowel evacuations, the particles having a resemblance to grains of rice. The general inflammatory state of the intestinal mucous membrane, throughout its entirety, drains the blood of its liquid portion rapidly, and collapse, due to stagnation of circulation, quickly ensues.

The remedies mentioned are only a portion of those tried, but there is no living advocate to-day can point with unerring certainty to one single organic or inorganic substance, howsoever administered, that can be safely depended upon in the treatment of Asiatic cholera. Both botany and mineralogy have been searched in vain for a cure for this disease.

The cause of this disease is perhaps accurately stated to be due to invasion of the blood, and, secondarily, of all the tissues of the living organism, by toxins or ptomaines, which originate in the upper portion of the small intestine at the early stages of cholera. These products of organic activity, whether of animal or vegetable organisms, it is here unnecessary to debate; but these noxious products enter the circulation through the villi of the intestine and rapidly and desperately poison the blood. It is clearly proved that the disease is the result of general blood poisoning from an intestinal origin. Whatever the chemic nature of the poison may ultimately be found to be, may be safely left to the bacteriologic laboratory. The practical and intensely important part that remains for physicians seeking to cure patients in times of this disease is to realize how much, as well as how little, it is within human power to do. The human organism is prostrated by a fierce and deadly poison. This poison is in the blood and in the cells of the tissues, and its work of destruction is quickly and effectually accomplished. Reflectively, to say nothing of experimental research, it would seem to me that the rational and only course that could be advocated with scientific assurance of relief, is to, as far as possible, literally cause to be removed these products which are death dealing to the body in which they happen to be found.

Now, in this same reflective mood, think for a moment and try with me to determine whether it is possible in such conditions as produce the symptoms of Asiatic cholera, it is safer to introduce other poisonous products to neutralize the noxious elements in the blood and cells, or whether it is a better process to, without the introduction of additional foreign substances, remove what we already find in the blood. To make this proposition clearer, it could be stated in another way, namely, the body is already bearing a crushing burden; shall we add other foreign substances as an additional burden to the load already carried? The principle seems to me to be at fault. The principle is the principle of Allopathy, but in the light of facts is it a safe principle to follow? It is reasonably scientific to produce in the laboratory, definite results in vessels of glass by the use of fixed reagents; in the organic laboratory of the living body, no such definite results can be demonstrated. The vital principle is an entity which enters into the formula and may be represented by the unknown quantity x in algebraic equations. Great and laudable efforts have been made to prevent as well as to cure this disease by inoculation.

Ferran, of Valencia, Spain, thrilled the world ten years ago with his proposition of a universal cure for this disease. His glory was then at its zenith. His fame has long since faded. So obnoxious became his proposition to the govern-

ment of Spain that laws were adopted to suppress Ferran's cholera inoculations.

A worthy colleague and laborious investigator, Professor Haftkin, of Pasteur Laboratory fame, proposed a modified inoculation for the prevention and cure of cholera in 1892. A reporter of the *New York Herald* was inoculated at the Pasteur Institute, and with credentials sent to expose himself to Asiatic cholera at Hamburg in September, 1892. The same reporter had been similarly inoculated by Ferran in 1886, and had the courage to make further exploits in behalf of his newspaper at Hamburg. A very widespread opinion prevails in America that the exploit of the *New York Herald* reporter during the ten days' stay as a nurse in the Hamburg Hospital constitutes a proof of the validity of Haffkin's claim, but the scientific world of Europe knows differently. *En passant*, it may be interesting to state at this place that further experiments have been made by Professor Haffkin in India with the cholera inoculations, and, unfortunately for the proposition, reports have recently come to me from reliable medical sources that a greater percentage are attacked with cholera who have been previously inoculated, than of those who have not been inoculated. This subject of prevention, however, is to be discussed by me in a paper to be read before the section on "State Medicine."

The result of prolonged reflection, covering many years, and the observations resulting from personal experience in the cholera epidemic in Europe of 1892, is the conviction that there is provided in the laboratory of the universe a remedy which surpasses the results of human ingenuity as much as does the sun surpass in brilliancy the light of the artificial lamp. The all-pervading and all-wide remedy, the greatest product of omniscent Nature's laboratory, which alone can cope with this pestilential disease of the human race, is nothing more and nothing less than the unmatched, unmatchable H_2O. Pure water is absolutely the only trustworthy cure for cholera, and if it came at a great price it would probably be more greatly valued. The human organism is so constituted that if it is assisted by H O every morbid element may be eliminated out of its domain. The acutely poisoned body quickly recovers its equilibrium and its harmony of action as soon as the processes of elimination can remove the invading poison. In the construction of the mucous lining of all the accessible cavities and channels it is prepared by an undiscernible law to successfully resist the entrance of every form of organism. The products of organic action alone are able to pass into the blood. If sufficient quantities of pure water, of a suitable temperature, are introduced into the body through the natural channels, it is actually possible to wash morbid products as well as organic forms of life out of the human body. The mouth gives entrance to the causative germs in Asiatic cholera. That is quite conclusively established. The locality of the development and formation of the toxin in the earlier stages is determined to be in the upper end of the small intestine; and from experience, as well as from the powers of reflective analogy, there is no doubt that the system can be saved from death if the morbid entity, the germ, is literally deluged away from the alimentary canal by the copious use of a remedy that cannot be of the slightest danger to the victim. The amount of water to be used varies in different cases. It is impossible to use too much; it is possible to use too little. From the earliest moment that the patient is seen the propositions should be, first, wash the whole alimentary canal with pure water; wash the lower portion by introducing irrigations of warm soapsuds, or merely warm water, into the colon sufficiently frequently and sufficient in quantity to cleanse that portion of the bowel effectually. The frequency of washing that portion of the bowel which is accessible from the rectum should be one, or two, or three, or four times a day, according to circumstances. At the same time from one to ten quarts of warm pure water, mildly medicated with peroxide of hydrogen or hydrozone, should be administered at regular intervals during the day as the prescribed remedy by the mouth. If the patient vomits, very well. Immediately re-introduce the quantity of water that was vomited. No harm can be done in any case, and if it is possible to save life it is possible to save it through this method. It is the quickest and the surest method of exciting the activity of the kidneys, and is the safest. It is the rational and effective measure for maintaining the volume of the blood. It is the scientific process by which to establish cutaneous circulation in the capillaries.

The use of simple and useful hygienic measures are the same as in other prostrating diseases. Patients should be fed with regularity at not too frequent intervals, giving the proper time between administrations of simple food for its digestion. The use of appliances for maintaining the heat of the body are not to be neglected.

The precise details of the method of treatment indicated at this time will be forthcoming in a subsequent paper.

ON SOME NEW REMEDIES.*

By E. M. Hale, M.D.

NEARLY forty years ago, when, in the literary solitude of a country practice, I began to write up certain medicines which were almost unknown to our school of practice, I did not suppose that I was going to fix upon myself a lasting notoriety.

But "it is the unexpected that always happens," and I must place on record the fact that at a certain period of every year, about the time of the vernal equinox, I usually receive a score or more letters, beginning about as follows: "Dear doctor, will you not send us a paper on New Remedies for our next meeting of the State Society?" etc.

So it was that when I received a letter from Dr. Evans, Chairman of your Bureau of Materia

* Read before the Illinois State Homœopathic Society, May, 1895.

Medica, I knew its contents before I broke the seal.

But what *is* a new remedy? It is not always a drug heretofore absolutely unknown. Cinchona had been used by the Peruvians a thousand years before the Jesuits introduced it into Europe. Cactus had been used by the ancient Aztecs for centuries before the time of Rubina. Hydrastis, iris, caulophyllum, cimicifuga, lobelia and podophyllum had been in use by the aborigines of North America long before its discovery by Columbus. Convalloria had been in use by the peasants of Russia long before it was introduced by Russian physicians. As the Aztecs used cactus in cardiac affections, so did the Russian peasants use convallaria in the same diseases. An *old* remedy may *become* a *new* one when its methods of action have been investigated by provings or clinical experience.

The really new remedies are mainly chemicals, which are produced for the first time in the laboratory. I allude to such drugs as phenacetine, antipyrine, salol, trional and others lately introduced. Their action was absolutely unknown, nor could it be even surmised until they were given first to animals, and afterwards to men, after the non toxic was ascertained.

I do not propose in this paper to go into an extensive discussion of any drug, nor to quote the problematical recommendations, or fulsome praises which have heralded them.

I shall only give my personal experience with a few of the latest.

As you are aware, these new chemicals are divided roughly into three classes, namely, *antipyretics, analgesics, and hypnotics*. Some of them are supposed to possess all three attributes.

As for their antipyretic power, let me say that among the most intelligent and advanced members of the old school, this power is considered of small value. They are now rarely given to reduce febrile heat, for it has been found that this reduction of heat is nearly always attended by positive injury. It has been found by actual experiment that in the infectious fevers, like typhoid and scarlatina, the toxic bacteria flourish with greater virulence under their use.

I have never used them for the purpose of lowering febrile heat.

But as analgesics, many of these new drugs are of positive value when intelligently used.

Take for example, phenacetine. When it was first introduced I began with the first decimal trituation.

I found that in the majority of cases when this was given in doses of grains one to ten, frequently repeated, when patients, especially women and children, suffered from rheumatic, neuralgic or muscular pains, these doses were satisfactory. But in older persons I found I was obliged to give from one to five grains of the crude.

Nor have I in a single instance seen any cardiac depression, sweating, or cyanosis follow the use of these doses.

You will naturally ask me to give you the "indications" for its use. The one indication is *pain*—pains which have not been promptly relieved by our proven remedies.

We can get no proving of a pure analgesic in the direction of painful sensations. Opium never caused an actual painful sensation.

Possibly we may find phenacetine a Homœopathic remedy for certain conditions of cardiac depression, attended by a subnormal temperature, with profuse sweating, but I have never tried it for that condition. Finally, I consider this drug a great boon to all sufferers from painful affections, if used in a proper manner.

Antipyrine stands far below phenacetine in my practice. It is a treacherous drug, for while a few grains are well borne by most people, there are many who cannot take it without danger. Yet there are cases where small doses will act with the happiest results where phenacetine has proved useless, as in some cases of pleurodynia, rheumatism and hemicrania.

Lactophenin I have often found an excellent substitute for phenacetine, and it will relieve pain when the two above mentioned fail. *Ammonol* is one of the very latest aspirants as an analgesic. It seems to possess qualities which no other possesses. It contains ammonia, which makes it a vascular stimulant, in addition to its sedative properties. I have lately had an opportunity to test its value in a peculiar cardiac trouble, following or complicating *la grippe*. The patient feels a pain on or at one side of the sternum; sometimes it amounts to an intense pain. There is a feeling of constriction across the chest. At the same time, or after this pain has lasted a day or two, the heart is forced to beat irregularly, or with a curious intermittence, in some cases omitting every third, seventh or fourteenth beat. There is a sinking sensation at the epigastrium, or an empty feeling of the whole chest. In some cases a slight murmur is heard at the mitral valve.

I soon found that digitalis, or strophanthus aggravated this trouble. Cactus relieved a good many cases by regulating the action of the heart, but the pain and sinking weakness was best relieved by ammonal, in doses of three or five grains every two or three hours.

I suffered from this complication of grippe for nearly a week. Insomnia occurred. I could not sleep on account of the irregular action of the heart.

One night I took five grains of trional, and slept six hours, and my heart beat normally all next day. In the evening, probably because I worked all day, the arythmia returned, but after taking trional three nights it left me for good.

This mention of trional leads me to the assertion that in the majority of cases of that disorder of the nineteenth century, insomnia, trional is far superior to any other hypnotic. I have prescribed somnal, chloralamid, sulfonal, paraldehide, and others, but they all possess objectionable qualities. In considerable experience with trional I have yet to see any unpleasant effects. I use it all the way from a grain of the $\frac{1}{10}$ up to ten grains of the crude.

It is of no value in severe pain, but when the patient has just enough to keep off sleep,

or when pain has left behind it a nervousness which prevents sleep, then trional is indeed a blessing.

I know that in theory our school discards hypnotics, but while we do this, our patients do *not*. They want sleep, without it they cannot battle with the cares of life, or work with any energy. There are many, many cases, when to deprive our patients of sleep producing remedies is a positive cruelty. It is especially in cardiac affections, organic and neurotic, that I value trional above all others.

The subject of gastro-intestinal antisepsis is now attracting a great deal of attention. We cannot render the contents of the stomach and intestines aseptic by the use of Homœopathic remedies. It is outside the realm of dynamic agency. We must select a substance or chemical which exerts anti-bacterial or anti-fermentive power. Many drugs have been recommended. At first napthaline was used; then boracic, muriatic and carbolic acids; then napthol, beta-napthol, benzo-napthol subgallate and beta-napthol bismuth, but all of the above are objectionable in some way. The two latter are the least objectionable, and I have often got excellent results from their use, when the gastric and intestinal contents are undergoing fermentation, or even rendered toxic from the action of injurious microbes.

Lately a preparation has been highly recommended by Dr. J. H. Kellogg, of Battle Creek Sanitarium, composed of sulphur, charcoal and diastase.

It is well known that there is no drug equal to sulphur in its power to prevent fermentation, either acid or bacterial. Charcoal is one of our oldest remedies for noxious gases in the digestive tract. Diastase prevents the fermentation of saccharine and starchy foods. These three substances are combined by Dr. Kellogg, and used in the form of tablets. He asserts these effects are greatly superior to any other preparation. The charcoal used by Dr. Kellogg is made from wheat, which he believes is the best form of *carbo vegetabilis*.

Some of you will remember that several years ago I recommended the tincture of the buds of *salix nigra* (black willow) as an excellent sedative to the uterus and ovaries, being superior to bromides, and without any pathogenetic effects.

In the *Medical Times and Hospital Gazette* Dr. Shaw gives some clinical experience which more than confirms my recommendation. He says it will quickly relieve the excrutiating pains of dysmenorrhœa and after-pain. He gives cases where one dose of sixty drops completely arrested them. In one case five doses kept the patient free from violent after-pains, although in her nine previous confinements she had suffered five or six days. Two cases presenting nervous, irritable conditions, somewhat resembling the incipient stage of puerperal insanity, were relieved by *salix nigra*. He asserts it is superior to morphine in abating pelvic pains. We should try this drug, although we have in cimicifuga, caulophyllum, viburnum and others excellent remedies, for they sometimes fail to give relief.

I do not use the large quantities recommended by Dr. Shaw, because I have found it effective in doses of five, ten and fifteen drops, repeated every half hour, or hour, as the cases require.

PHENIC ACID, COMMONLY CALLED CARBOLIC, AS A THERAPEUTIC AGENT.

By James R. Wood, M. D., New York.

MEDICAL routine must be bitterly and constantly antagonized, lest it become a besetting sin. How few who have grown old in practice can honestly say that they are not slaves to some idea! We should not let a day pass without trying to eliminate such tendencies from our practice; and, although success may not always crown our efforts, yet each sincere endeavor will teach us something new.

When the salicylates first appeared in Paris, an old African missionary, crippled with rheumatism, was told upon his return to his home in France what wonderful remedies they were for rheumatism. He replied: "Give them to me quickly! For I have seen many new remedies lauded for their great virtues, and which were apparently useful, but within a short period physicians seemed tc lose confidence in their potency, and after a few spasmodic reawakenings, they were permanently retired. So I beg you to give me these new remedies at once, while they still have the powerful prop of enthusiastic confidence to help their curative power."

The salicylates have been among the few great drug lions which have not become weak and gentle lambs. Still, they certainly have not sustained all their early promise of greatness.

One by one I have tried to doubt the efficacy of certain medicines whose virtues I had so long held in such high esteem that they were fast drifting to the routine list. Very often, after earnest efforts to supplant them by other remedial measures, I have been surprised to find how many agents were at hand to fill their place in therapeutics. Even among those physicians who doggedly resist every temptation to allow pathology to displace symptomatic treatment, routine will creep into their practice.

Of the chemical remedies which I have thus tried to replace by other agents, carbolic acid remains among the very few which have compelled me to return to them again and again with renewed confidence.

This paper will give in brief outline only a few of the pathological conditions where the application of carbolic acid seems to be of undoubted value. Later, each class of cases will be written more in detail.

Very often I have been prevented from recording my personal experience because, upon severe examination of each year's work, I have found so much to censure in my medical sins of omission and commission that I had an intense dread of those who knew my faults. But, as I recall many errors of our most admirable practitioners, I dare the venture, hoping and praying that no sentence

of mine may be the means of leading any one into false paths.

Comparatively few are aware how much the medical profession owes to Dr. Declat, of Paris, for the earliest and most thorough teachings of external and internal antiseptic treatment of wounds and disease. It is not far from forty years since he began his studies in this direction. In after years Dr. Lister personally learned from Declat his ideas in antiseptics, and Listerism has resounded all over the world, while Declat's name has been hardly mentioned. Unfortunately, Dr. Declat seriously injured his name by permitting it to be associated with a company which prepared his solutions of phenic acid.

In 1854 an exhaustive work was published on the therapeutic value of nitro-glycerine; yet the physician who dares to assert that it is a very old remedy generally meets with ridicule, while the only thing ridiculous about it is "the rediscovery of the screw," as Dunham would put it. So with isopathy and serum therapy, Dr. Lux and other names are seldom mentioned by the therapeutic resurrectionists of to-day; yet physicians keep as curiosities vials of phthisin, hydrophobin, venerin, etc., which were prepared in the early part of this century.

I have wandered from my subject merely to point out the injustice of ignoring the earliest promulgators of certain therapeutic ideas, for which they were despised and persecuted in their day.

I shall now endeavor to present a few conditions where carbolic acid may be used with benefit.

First, in a large majority of those diseases whose microbes may seriously attack and injure the muscular walls of the heart, it may be used with some confidence, especially in such diseases as erysipelas, typhoid fever, epidemic pneumonia and grippe. The protection of the heart by the free internal use of phenic acid I believe can be thoroughly proven after an extensive trial by those who have sufficient confidence to push it as a *chemical remedy*, not as an *alterative*. A Scotch physician once said: "I love the word alterative, for, like chemical affinity, it is a useful rock to dodge behind."

What is the free use of carbolic acid? If perfectly pure, such as Calvert's No. 1, or Squibbs' phenol, two or three drops of carbolic acid in a tablespoonful of glycerine and water may be given to adults every two hours, and continued for several weeks if needed. In some cases I do not hesitate to give it every hour in these doses. I have never seen any serious irritation of the kidneys from its prolonged use. In those cases where a slight irritation appeared, I simply suspended its use for a day, and ordered the patient to drink plenty of water.

Having used it liberally for many years and encountered no serious mishap, I feel perfectly safe in increasing the dose when occasion requires. Where patients can afford it, I order the Declat solutions; but in the case of the poor, a thoroughly reliable preparation may be made by dissolving a teaspoonful of very pure carbolic acid in a pint of water containing glycerine or syrup sufficient to sweeten it. Of this solution a tablespoonful every two hours may be given to adults, a dessertspoonful to children and a teaspoonful to infants of one or two years of age. I have not hesitated to take myself doses of two or three tablespoonfuls of this solution, which is slightly weaker than one per cent.

In many cases of erysipelas, it is pleasing to see the rapid and thorough relief of the patient. Conjointly with the internal administration a two or three per cent. solution should be used on the affected part at the same time. In some patients I prefer pure turpentine for the external application, followed immediately with carbolized vaseline. Dr. Cornell formerly used a very efficient external application, composed of turpentine, carbolic acid, iodine and alcohol. As I look back over the period of the war, I regret that I did not know and use carbolic acid, instead of the wretched solutions of sugar of lead and opium, which were common practice then.

In typhoid fever, among the many advantages gained, I have found not the least was that, after a few days' constant use, the passages had very little offensive odor.

For many years I have used carbolic acid extensively in diseases of a septic character, and have been so thoroughly satisfied with results that I feel a certain pleasure and confidence in being called to attend such diseases. An account of other treatment incidentally used will be reserved for the future.

In scarlet fever I have observed no special value in carbolic acid, and in diphtheria do not consider it of much benefit, except to protect the heart, as before stated. In some forms of pulmonary phthisis, it has proved of use, especially when combined with sulphuretted hydrogen. It is difficult to give exactly the forms of tubercular disease in which it has proved most beneficial. I had three advanced cases, which yielded with surprising rapidity to the internal use of carbolic acid, together with impregnating the air of the sleeping-room with creosote vapor. The creosote was placed in tin pails, and hung at some distance above a lamp. In other cases, there was not such marked relief. I have not found the internal use of creosote of such efficacy as its heated vapor constantly inhaled.

Dr. F. A. Burrall, who was one of the earliest advocates of the internal administration of carbolic acid, observed its great potency in a number of troublesome cases. In an extensive ulceration of the breast from cancer, which could not be safely operated upon, he completely healed the breast, by its constant internal and external use, and kept the patient in considerable comfort for some years, although she finally succumbed to the disease.

It has been found exceedingly beneficial where purulent cavities were present, before and after operation for the removal of the pus.

I have tried to make salol supply the place of phenic acid in some cases, but have never been as well pleased with the results.

In epidemic pneumonia the phenic acid serves a

double purpose, both in relieving the patient, in some cases with rapidity, and also in protecting other members of the family. In such epidemics, those about the patient should take the solution three or four times a day. Travelers exposed to impure water may, in a large measure, be protected from its evil effects by using the solution after meals and on retiring.

In carbuncle, used internally and externally, it certainly does good. For various ulcerations, especially of the mouth and tongue, and in some irregular forms of intermittent fever, sometimes combined with nux vomica and ipecac, it often proves efficient. In puerperal septicæmia, its combined internal administration and local use is of undoubted value. Pyæmia has yielded to its free and persistent use. Many other septic conditions are alleviated or cured by it.

It should be remembered that carbolic acid is not a disinfectant, but an antiseptic. It may be combined with the disinfectants, where disinfection is necessary. Other valuable combinations are iodine and ammonia. The one per cent. solution of carbolic acid, containing a small amount of the fumes of ammonia, I have found most useful in a large number of diseases, especially where fever was present.

On account of the length of this paper, I shall defer what I have to say on the use of antiseptics and disinfectants to some other time.

TROPICAL DYSENTERY.

By J. A. Carmichael, M. D., New York.

IN the cholera season of 1849, in which this dread disease was second in malignancy only to that of 1832, during the entire summer the temperature was oppressively warm, and the air was filled with moisture. Towards the close of the season, and after the cholera had subsided, there followed in its track one of the most malignant epidemics of dysentery that ever prevailed in this country. The etiology and pathology of the epidemic so closely resembled that of the disease as it prevails in tropical climates, especially in Egypt, that we are induced to translate from the *Progres Medical*, of Paris, June 15th, the very clear and scientific description of dysentery and its microbic origin, as given by Dr. Zancarol, of Alexandria. We feel assured that it will have a special interest for the profession during the present hot summer.

Tropical dysentery is a specific entero-colitis of a microbic nature, and characterized by necrobiotic ulcerations. It is, in other words, a furuncular condition of the intestinal mucous membrane, and is seen most generally in warm, humid climates. The season most favorable for its development is that which presents most humidity, hence it occurs very frequently in Egypt in the autumn and spring, and but rarely in winter. Its most predisposing cause is everything that may diminish the functions of the skin, and thus augment the functional activity of the internal organs, of which the liver and intestinal surface assume the largest part. So it is that furnucular and other cutaneous affections are of such frequent occurrence in Egypt, and, like dysentery, are greatly increased in the warm and humid seasons. In general terms it may be said, that every debilitating cause which acts upon the digestive tube, predisposes to attacks of dysentery, and insufficient and improper nourishment, as also excessive indulgence, multiply the tendencies to this disease. The workers amid great heat, such as firemen, stokers, cooks and mechanics, those who lose their rest at night, who indulge in excessive venery, in drinking, etc., all these things predispose to attacks of dysentery. The existence of hemorrhoids, of pregnancy, is also another exciting cause producing it.

Pathological Anatomy of Dysentery.—The study of the pathological alterations of dysentery has always presented great difficulties, for the reason that the dysenteric patient very rarely dies at the acute period of the disease, and death generally occurs after a long continuance of it. The most frequent cause of death is septicemia, which makes it very difficult to distinguish the anatomical alterations due to this last complication from those belonging to the dysentery itself. Abscess of the liver is very often present in dysentery. This complication becomes, so to speak, the principal malady, and produces secondary alterations so important that they may mask those that are peculiar to the dysentery. Hence it is that authors basing their opinions upon the cadaveric changes that have occurred, have been led into error, and have multiplied the forms of dysentery. In this way they have admitted an ulcerative, gangrenous, diphtheritic and an ulcero-gangrenous form, and have created secondary subdivisions, which are all the same, but of different intensity. They have also described a chronic and acute form, which is not exact as respects the duration of the disease, but which represents the quantity of the pathogenic virus absorbed. This virus is less in the acute form, and more abundant in the form called chronic. In other words, the anatomical lesions of dysentery are in relation, not with the duration of the disease, but with the quantity of the pathogenic element which has been introduced into the organism.

The lesions of dysentery are of two kinds—primitive and secondary.

Primitive Lesions.—In these there is congestion of the intestinal mucous membrane, and exfoliation of the epithelium is the initial and constant alteration. In the lighter forms it is limited to the large intestine, but in the graver forms the exfoliation extends to the small intestines, and is more or less complete, according to the intensity of the disease. This alteration is accompanied by tumefaction of the intestinal glands of Lieberkuhn and Peyer, with slight submucous hemorrhages. To this first phase succeeds the dysenteric ulcer, whose seat is upon the mucous membrane of the large intestine, and may involve only the mucous membrane or even reach the serous. Its form varies, but the more or less rounded form is the most frequent, with elevated and often ir-

regular borders. Its dimension varies also, and it sometimes happens that an ulceration of the intestine may extend the whole length of the surface of the colon. The formation of the dysenteric ulcer is surprisingly rapid. Thus, an animal inoculated by the rectum with dysenteric fæcal matter will die in forty-six hours, and present very deep ulcerations of the colon. The seat of dysenteric ulcerations is very variable, but it may be said as a general rule that the number of ulcerations increases the nearer the approach to the rectum. The ulcerations of the small intestines are more shallow and smaller than those of the colon, and in this case the mesenteric glands become tumefied. The alterations just described, and which are the most usual, sometimes assume a different aspect, and so have given rise to the denomination of the sangrenous form by some authors, and the diphtheritic form by others. We sometimes see in these cases the intestinal surface filled with islets or plates of a less vivid color than normal, and which at a more advanced period of the disease are of a dirty white and finally become black, gangrenous and œdematous, so that on first view they may be taken for ulcerations filled with a purulent substance.

But on lifting up this first layer with the forceps, the pultaceous substance is recognized as a form of membrane which covers the ulceration, and is generally adherent only to the borders of the ulcer. These membranes are detached during life, leaving the ulcerations with a naked surface. If the ulcerations become united the total ulcerated surface is much more extensive than in the ordinary form of dysentery. The covering membrane is, in fine, nothing more than the intestinal mucous membrane in a necrosed condition. This necrosis has nothing in common with diphtheria. It is always the necrobiosis of the mucous membrane itself which produces these ulcerations, an altered mucous membrane which is said to resemble the diphtheritic exudation. In this form, the bottom of the ulceration is more extensive, more shallow, and hence, more apt to absorb ptomaines and causing pyohemia to be more frequent, its duration shorter, and its termination more fatal. That the ulcerations are caused by the necrosis of the intestinal mucous membrane there can be no doubt, and it could not be otherwise, seeing the prodigious rapidity of their formation. M. Kelsch has produced the same alterations by the injection of ammonia into the rectum. The number of ulcerations generally depends upon the quantity of the virus absorbed, which is the pathogenic substance of dysentery. The duration of the disease corresponds to what is called the chronic form, but which is merely the sum of the pathogenic substance absorbed by the long continuance of the disease. The necrobiotic ulcerations progress and often end in perforation of the intestine. Of these there are sometimes many in the same body, some of them adherent, others not, and so the alterations caused by septic peritonitis are found in the peritoneal cavity. At other times—happily, very often—the work of reparation of the ulcers terminates in a cicatrix, which is represented by a smooth surface of a pearly color. The walls of the intestine above the cicatrix are thin and atrophied, the glands destroyed; in a word, the intestine at this point is deprived of its functions.

Secondary Alterations.—A surface as extensive as that of the large and small intestines, which is denuded of its epithelium in different degrees, and numerous ulcerations in constant contact with pathogenic elements, which continually multiply and as continually produce toxines, constitute very favorable agencies for the production of organic alterations and changes, and thus the whole organism is made to feel the consequences of dysentery, and so septicemia becomes the most frequent complication, with all the transformations arising from it. The most frequent complication of dysentery is abscess of the liver. In a general statistical detail of abscess of the liver, in 612 cases, there were 444 in which there was exact information as to the antecedents of the patients, and in those in which there was an opportunity for autopsy. In the cases of the patients who had had dysentery, there had resulted abscesses of the liver fifty-nine times in one hundred cases. In effect, dysentery, when it is slight and of short duration, leaves no trace of its passage upon the intestine. There are cases, too, in which intestinal ulcerations are seen, in spite of the denial of the patients that they had ever had dysentery. On the other hand, dysenterics are met with who have never had any symptoms of this affection, a fact which has been established frequently in experimental dysentery upon animals and in other observations. One is thus authorized to admit without fear of being deceived, that abscess of the liver in warm climates is nearly always secondary to dysentery. The distinction, then, of primitive and secondary abscess of the liver, has no foundation in fact.

The tropical hepatitis which produces abscess has many forms. Sometimes it is in the form of phlebitis of the vena portæ, and in this form, which is also the most fatal, we usually find a considerable number of abscesses connected with the ramifications of the vena portæ. There is also diffused suppuration in the hepatic parenchyma. The walls of the abscesses are often gangrenous, and in this form of abscess the inflammation of the vena portæ is the point of departure of the abscess, and the dysentery is the cause of the phlebitis. In the next place, there are cases where there is no trace of phlebitis, and consequently it is not easy to follow the course pursued by the pathogenic element, either with the naked eye or the microscope, which has produced the abscess of the liver. These abscesses are those whose alterations are much the most limited. They are often unique, and besides the changes in the walls of the abscess, there is only a simple congestion of the hepatic parenchyma in the neighborhood of the abscess. In the cavity of the abscesses there are sometimes seen indurated hepatic vessels, stretched across in the form of cords, that correspond to the ramifications of the vena portæ, and as the abscess progresses towards a cure, the cavity becomes concentrically contracted. The dimensions which the abscess

had before its opening, and which could contain a large quantity of pus, contracts into a small cicatrix the size of an almond, in a completely normal hepatic parenchyma, which corresponds physiologically to a liver provided with all the conditions necessary for normal physiological functional work. Very different is it in the case of intestinal dysentery, in which, after cicatrization of the ulcers, there remains an intestine incapable of performing its physiological function, because of the irreparable devastation left by the disease.

Bacteriology of Dysentery and of Abscess of the Liver.—From what has been already said, we may conclude that the pathogenic element of tropical dysentery is the same as that which produces abscess of the liver. Bacteriological examination of abscess of the liver and of dysentery furnishes corroborative proof of this fact. The blood of two dysenteric patients, received from the basilic vein, was submitted to examination and gave the following results: In one, streptococci were found, in the other the blood was sterile. Examination of the blood of twenty-two patients who had had abscesses of the liver during life, revealed streptococci in twelve. In six there were staphylococci; in one, the bacillus pyocyaneus, and in one, the bacillus clavatus. In one single case only was the blood found to be sterile, and this was a case of abscess of the liver from a traumatic cause. The two patients with the bacillus pyocyaneus and clavatus, were in a condition of advanced pyohemia. The pus from thirty-six patients operated upon for abscess of the liver, of whom two were in a very bad condition, yielded streptococci thirteen times, combined with the bacillus coli in one, once the staphylococcus aureus, once living amœbæ, with sterile pus for culture. Such were the bacteriological results. Was there any relation between the march of the disease, and the kind of micro-organism found by the examination?

In answer to this question we furnish proofs. Abscesses of the liver operated upon and cured have, upon bacteriological examination, presented streptococci in the blood in eleven cases out of thirteen, of which two were associated with staphylococci, one staphylococci, and one in which the blood was sterile in an abscess from a traumatic cause, as has already been said. In one of the patients, there had been no symptoms of pyohemia. Examination of the pus revealed streptococci four times, once amœbæ and sterile pus. Morsels of hepatic tissue cut during the operation contained cocci in abundance. During life patients with abscess of the liver, showed specimens, in the blood, of streptococci four times, staphylococci three times, the bacillus pyocyaneus once, clavatus once, and sterile pus once. After death streptococci three times associated with amœbæ. This patient had had liquid diarrhœa without amœbæ.

Pathogenesis of Dysentery and Abscess of the Liver.—Statistical analysis shows that suppurative hepatitis is always the consequence of dysentery, or, what amounts to the same thing, that there is but one single pathogenic element for the production of these two diseases. In a communication to the last French Surgical Congress in 1893, the following conclusions were arrived at: Abscesses of the liver are of microbic origin. The principal factor of these abscesses is the streptococcus. The future will decide whether other organisms than the streptococcus can produce the same effect. Dysentery, being of the same nature as the abscess of the liver, the pathological cause is here also the streptococcus.

As regards the amœbæ, which are often found in the fæcal matter in healthy individuals, they play no part in the pathogenesis of this affection. The port of entry of these micro-organisms is most frequently the intestinal tube. Since the communication referred to, further observations and the results of experiments upon animals, have not only given the opportunity of confirming the first conclusions, but served to render them more positive.

First Series of Experiments.— If dysenteric fæcal matter is injected into the rectum of a cat with living amœbæ, a typical dysentery is produced. The animals usually die at the end of thirty-nine hours, minimum; or nine days, maximum. Some of them may survive and be cured, others injected present amœbæ in their evacuations in seven out of eleven. Autopsy reveals the typical alterations of dysentery, such as those already described as occurring in man. They show streptococci in the thickness of the intestinal coats eleven times in twelve. Moreover, suppuration of the liver takes place six times in twelve in these same cats. Around or within the abscesses of the liver we find streptococci, and not amœbæ, same in sections of the liver and intestine.

Second Series.—If hepatic pus be injected into the rectum of a cat without amœbæ, sterile on culture, but not really sterile, the results of inoculation proving that the streptococci exist, we again obtain a typical dysentery, and abscess of the liver will occur four times in seven. Sections of the intestines and of the liver around the abscess and its walls, will also present streptococci, and not amœbæ.

Third Series.—If the dysenteric fæcal matter of man, with or without amœbæ, be injected into the rectum of a cat, dysentery will be developed, twice in eight times with amœbæ, six in eight without. Streptococci will be found in sections of liver, intestine and around the ulcer.

Fourth Series.—Dysenteric fæcal matter rendered sterile by the heat of a stove at 50°C. and 60°C. during one hour of sterilization, and afterwards one, seven, ten hours, will cause all the micro-organisms, except the streptococcus, to disappear. In this case, cats inoculated will have only a mild attack of dysentery, and easily cured.

Fifth Series.—Injections of human fæcal dysenteric matter without amœbæ will also produce dysentery, with streptococci found in the sections as given above.

Sixth Series.—Injections of pure streptococci cultures into the rectum of the cat, will develop typical dysentery four times in eight, and autopsy will show the special alterations of dysentesy. Moreover, the streptococci will be found in

many of the organs, viz., lungs, liver, kidneys. vena portæ, spleen, and the mesenteric glands and intestines.

Seventh Series.—Injections of pure streptococcic cultures into the ischio-rectal space will produce dysentery, and the results of bacteriological examination will be the same as above.

Eighth Series.—Injection into the rectum of a cat of the pus taken from an arthritis of the knee will produce diarrhœa for twenty days, followed by cure.

Ninth Series.—Injection of the pus from a phlegmon of the shoulder produced slight diarrhœa, lasting a month. In this case the intestine showed a superficial destruction of its epithelium.

Symptomology.—Dysentery presents indications peculiar to each locality, and so it would be useful to give a general view of the principal symptoms of it as it appears in Egypt, without pretending to make a detailed study of this disease. The three cardinal symptoms of it are: Mucosanguinolent evacuations, tenesmus and diarrhœa. The beginning of dysentery is sudden, with diarrhœa as its initial symptom; or, to speak more properly, an intestinal dyspepsia preceding very frequent evacuations. The secretions of mucus and blood in small quantity are inodorous. They are from the lower portions of the intestine, and intimately mixed in different proportion, but always with a predominance of mucosities. The color and aspect of the evacuations vary very much. Sometimes they are more intimately mingled and present the appearance of the expectoration of pneumonia. At other times the mucus and blood are less mingled and may be separated. The tenesmus, the result of irritation of the lower portion of the rectum, precedes and accompanies the evacuations. This symptom, which is never wanting, is only a spasm of the sphincter, and is the most troublesome for the patient. The progress of the dysentery of Egypt depends upon the treatment, which, if faithfully applied from the beginning, will cure in a few days if the disease is in its initial period. Later the cure is more difficult, especially if complications have already supervened, such as ulcers of the liver and pyohemia.

Treatment.—The treatment, *par excellence*, of dysentery, is ipecac. This remedy is a specific of the disease. There are many ways of giving it, but the best is, 50 centigr. of ipecac with five of opium morning and evening until the blood of the evacuation has disappeared, and with it the tenesmus. This happens generally on the fourth or fifth day. After this a purgative may be given, if the characteristic evacuations reappear. With the medical treatment, milk exclusively should be given. It is a most important adjuvant. At the period of the ulcerations of dysentery, there are two indications to fulfill. Cure the ulcerations and make intestinal antisepsis by washing out the intestine by the aid of enteroclism. Injections of a litre or litre and a half of distilled water, with a gramme and a half of the nitrate of silver, should be administered every two or three days. There should be injections of sterilized water on the days when the nitrate of silver is not used. Give by the mouth, naphthol associated with the salicylate of bismuth; dose, 2 gr. in 24 hrs. If the abscess of the liver shall have formed, the only treatment admissable is a surgical opening. If they are multiplied, the prognosis is fatal. As respects the change of climate and its benefits, after the abscess is formed, it is an illusive expedient, the fatal march of the disease is only adjourned, and its termination inevitable. The prophylaxis of dysentery and abscess of the liver consists in avoiding the causes that produce these diseases. I desire to speak of a very efficacious hygienic measure in warm climates, by the use of which one is less exposed to dysentery, and hence to abscess of the liver. It is the use of the cold bath during the whole year. A long experience has satisfied me of its great utility.

We would add a few words in additional commendation of the above very able and conclusive exposition of a disease which so often prevails during seasons of torrid heat, and whose real causa vivendi has been heretofore so imperfectly known and understood. The microbic source of diseases of various kinds is now engaging the attention of the profession all over the world so profoundly, that it seems to us impossible to have a clearer exemplification of micro-organic pathogeny than is embodied in the admirable paper of Dr. Zancarol. We would also add in addition to the remedies proposed by Dr. Zancarol, and administered by lavage, the peroxide of hydrogen and Sanitas, as efficient disinfectants and microbicides. The three great remedies promulgated by Hahnemann for the cure of dysentery, were, as is well-known, ipecac, colocynth and mercurius corrosieus. It is interesting to note how in the progress of science, the therapeutics of all schools is rapidly approximating and moving along the same lines, and it requires no prophet's eye to foresee, and no prophet's voice to foretell, that at no distant day and under the potent wand of science, the division walls between schools will vanish, and the united profession will clasp hands over the grave of dead and buried antagonism.

THE VIEWS OF LAWSON TAIT UPON THE NATURE AND PREVENTION OF PERITONITIS.*

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MR. LAWSON TAIT, after seeing more than one thousand cases of traumatic peritonitis, has said that, if we exclude gross mechanical lesions, such as acute hemorrhage, cardaic valve rupture or other failure, destructive hemorrhage at the base of the brain, there is hardly any such rapidly and certainly fatal disease as simple inflammation of the peritoneum. Coming as this does from one who has had such an extensive experience with this destructive condition, and whose views have always borne the imprint of

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such a marked personality, it is useless to say that it should not only occupy our most careful attention, but that we should expect from this source ideas of a more or less original character.

Those who have had the opportunity of reading Mr. Tait's masterly article upon the nature and prevention of peritonitis, which was published some time ago in the *British Medical Journal*, are no doubt familiar with his original views upon this very important subject. And believing that others may not have had such an opportunity, we take this occasion to review some of these ideas, or perhaps, more correctly speaking, of making his article the principal basis for the presenting paper of to-night.

The remarks contained in the above mentioned contribution can hardly fail in creating within the mind of even a casual observer the impression that, although Mr. Tait has been wrestling long and hard with this difficult problem, he is as yet far from being satisfied upon several points; and in regard to some of the points upon which his mind seems to be settled, he has failed to express himself with the necessary clearness to make his ideas thoroughly understood. He differs from Bichat, who almost a century ago considered the peritoneum as a lymph sac—a consideration which went far towards explaining some of the phenomena observed in intraperitoneal operations, and which satisfactorily explained why intraperitoneal operations could tolerate more infection with less harm, provided free catharsis could be maintained, than operations performed in regions elsewhere.

In referring to the cause of peritonitis he expresses himself, as usual, decidedly against the germ theory, and in a more or less indistinct manner leans towards the nervous origin of the trouble. He argues thus: "Peritonitis is not a lesion which fits into the germ theory of disease at all, and no hypothesis based on the facts of the decomposition of dead infusion in the physiological laboratory helps me to understand the facts of peritonitis, as I have it under my eyes almost every day of my life.

"No theory of inflammation will ever fit the facts of the process which has not its basis in the mechanics of the tissues, and there is one element of which we have as yet far too little knowledge to enable us to solve the mystery. I mean the nervous system, and its method of action in those perverted processes which we call disease. The mere difference in the process of inflammation in proportion to nerve supply is enough to suggest this, and the extreme rapidity of the process in the peritoneum must be, in its initial steps at least, due to the disproportionate supply of that class of nerves which do not govern movements, but which are nerves controlling function until they are disturbed, and then they become nerves of sensation. Of the real work and influence of these nerves we know little, but if we look at the face of a patient, even as soon as twelve hours after the onset of acute peritonitis, even before pain has become a leading feature of the case, we shall be easily led to the conclusion that nerve disturbance is doing more to kill her than microbic invasion."

That the nervous system is a powerful factor in the process of peritonitis is a feature that will find a ready and no doubt almost general admission; and not alone this, but also the fact that a mere look at the patient will satisfy the observer that the end is being rapidly reached through the influence of the nervous system. But these two admissions far from carry the conviction to the mind of any but that of Mr. Tait that while there are marked nervous phenomena in connection with traumatic peritonitis, and while this is recognizable almost at a glance, we believe but very few are willing to admit that the end is not due to a microbe invasion. On the other hand, those who believe in the germ theory, although unable to perhaps satisfactorily explain, still within themselves have the belief that it is due to microbic invasion, and that the nervous phenomena are but manifestations resulting from the true cause, namely, microbic invasion, rather than the cause itself.

In speaking of the physiology and pathology that is concerned in this process, Mr. Tait gives us interesting and original material for reflection, as follows:

"In addition to what I have said, I have to point out that one great anatomical fact concerning the peritoneum has had, so far as I can discover, no kind of importance attached to it in its pathological consideration; in fact, it is not alluded to at all, save in the anatomical text books. It is that all the organs actively engaged in the primary preparation of the systemic nutrients are not only enclosed in the peritoneum, but all the blood gathered from these great organs is collected by a series of minute venous radicles exposed voluminously and immediately under the peritoneal epithelium to any influences which may arise in it. In addition to this, the whole of the blood prepared in or by these organs is mixed together in the portal vein and carried into the liver, where it undergoes its final change previous to the oxidation which seems essential for tissue nutrition everywhere. In the liver there is removed from this mixture of primary digestion a substance which is returned to the intestines—bile. This interesting material has been the subject of countless researches and experiments, but we do not know yet any one satisfactorily established fact about it, save that in excess it acts as a purgative.

THE GREAT OMENTUM.

"One of the many curiosities and puzzles of the peritoneum is the great omentum. I am disposed to regard it as the arbiter of the intra-peritoneal currents. That there is an ebb and flow in the peritoneum I am quite sure, though I have not yet unraveled the secrets of its tides. The great serous sac holds in it, like a dressing bag, a great mass of serous covered organs which may, any and all of them, secrete into its cavity, or absorb from it. Possibly they may carry out one process at one time and the other at another." Continuing this line of argument in the section upon "The Cause of Death in Peritonitis," he remarks:

"At this point I am brought back to my physiological belief about the peritoneum, and I say at once that the cause of death in peritonitis is a disturbance of the ebb and flow of the serum stream of the peritoneum, and the disturbance of the function of the liver. In fact, the liver is the lethal organ in peritonitis.

"In any ordinary bilious disturbance, say what is known as the bilious vomiting of the crapulous, the first thing which happens, if I read the phenomena aright, is an over-secretion of bile. How this is arrived at I do not know, but there are two results from it which are invariable. The first thing is that the usual course of the bile is diverted; the pylorus seems to be temporarily paralyzed; bile flows into the stomach, and thence is speedily ejected. The second result is —and sometimes the two are not concurrent, but are alternative—the bile passes downwards and excites a bilious diarrhœa.

"At the post-mortem examination of fatal cases of acute traumatic peritonitis very little variation, save in degree, can be found.

"The main features are the uniform occupation of the intestines by vast quantities of gas, and some fæcal fluid, in which there is a marked absence of bile, as shown clearly by naked-eye appearances, and proved incontestably by chemical analysis. There can be no question that a most serious disturbance is due to the misdirection of the bile current. The coats of the intestines are thickened, and the muscular fibers of the intestines blurred in their outline by hæmicstasis and its resulting effusion. The stomata of the peritoneum are very prominent, and crowded with cells which appear as if they were streaming out. The stigmata are greatly exaggerated in size, and the minute blood vessels present all the characters familiar in the frog's web. If I had only a knowledge of what might happen in such structures with such alterations, but without the clue afforded by the clinical history of peritonitis, I should say that the intra-peritoneal flow must have been checked, and the muscular coats of the intestines paralyzed. As to the latter, I do not think for a moment there can be a doubt that it is one of the initial processes in peritonitis, and largely accounts for the distension. That the intra-peritoneal flow is checked is indicated by two things—first, that the peritoneum is dry; that is free from effusion, just in proportion to the acuteness of the processes, until in a very chronic case, which will probably recover, you may be called upon, as I have been, to remove pints of purulent fluid from the abdomen.

"The second point suggestive of this conclusion is that we might urge the increased quantity of biliary fluid thrown off by the liver, as being due to the increased quantity of fluid passed into the portal circulation by the arrest of the intra-peritoneal flow. The ejection of the bile from the stomach may also possibly aid the mechanical stasis in the intestine, and its consequent distension, by depriving the muscular coats of a natural stimulus to vermicular action, for that is suggested as one at least of the subsidiary functions of the bile, though it is quite certain that this action goes on without the bile in normal digestion."

The symptoms of this trouble, viewed from the standpoint of this surgeon, are very numerous, very various, and very serious, but that there are none, no, not one, nor any group of them upon which absolute reliance can be placed. This statement is coupled with the report of an interesting case, in which the application of a solid piece of sulphate of zinc to the uterus, an operation that he had already performed ten or twelve times before upon the same individual, was suddenly terminated by acute peritonitis. Notwithstanding that the post-mortem examination had revealed about a pint of pus, the temperature had never gone a full degree above normal, nor had the pulse increased beyond ninety beats per minute; and on the other hand he points to the records of cases in which the temperature rose to one hundred and six degrees and the pulse to one hundred and sixty and two hundred, and yet recovery occurred.

These illustrations have been drawn from life, to emphasize how misleading the pulse and temperature may become.

The two cardinal symptoms upon which Mr. Tait has laid the greatest stress are alteration of face and intestinal distension, and these are always regarded with anxiety, and constitute the symptoms which determine the application of his preventative treatment, namely, purgation. The alteration of the face may in fidgety people become deceptive, and that expression which he regards most seriously is not one of pain but of anxiety, accompanied by a tendency to chatter and ask questions. If the patient is quiet and will not talk, she is pretty sure to recover; if she persistently chatters she is sure to die. Continuing upon intestinal distension, he remarks: "The symptom which I most dread is intestinal distension, and that all my clinical aids, assistants, and nurses are constantly on the watch for. I never saw fatal peritonitis in which distension was not a prominent feature. I never said that every case of intestinal distension after an operation represented a case of peritonitis, yet this is the manufactured view which an enthusiastic young assistant surgeon of a well-known metropolitan hospital set himself as a task to combat some two years ago."

In speaking of the prevention of peritonitis, for such is Mr. Tait's view, he says:

"Another matter regarding which my convictions were altered very early in my practice was that strange and unaccountable thirst which inevitably follows the opening of the peritoneum, even in a mere exploratory incision as much as in a protracted and severe operation. Cut down through the abdominal wall to the peritoneum, without damaging the membrane, and there is no thirst—at least, it is rarely seen, and is then very transient. But open the peritoneal cavity and you have an invariable symptom—intolerable thirst lasting for twenty-four to sixty hours. At first I thought that this was clear natural indication that the patient should have plenty of fluids and plenty of ice. But I have long since come to regard

ice as one of the things which should be banished absolutely from the sick room. It never acts in any other way than to increase thirst, and the best thing to allay thirst after an abdominal section is warm water. Gradually I found it wise to diminish the quantity of fluid after an operation to the vanishing point, and now I keep my patients for as nearly forty-eight hours as may be in absolute starvation—this being modified, of course, by age and previous exhaustion. I have indeed come to regard this thirst, not as an indication for the administration of fluids, but, on the contrary, as one indication that the traumatism of the peritoneum has altered its flow and ebb in some strange way, and that the less fluid there is about the sooner will the natural rectification of the process be effected. Certain it is that since I have adopted this policy, sickness after operations —I do not mean mere anæsthetic sickness, but the dreaded sickness of the second and third day —has almost disappeared, whereas formerly it was almost a routine symptom.

"Again, if sickness sets in on the third or fourth day, or at any time after, all food (and in that I include water) is absolutely stopped for twelve hours, or even longer if necessary. I was driven to this by the uniform experience that all drugs generally employed for the arrest of vomiting were, under the circumstances of my practice, absolutely futile; that any food given came back only altered by biliary admixture. Further, I was influenced by the perfect certainty that nothing could possibly be digested or absorbed by the stomach so long as bile was being poured into it.

"I have therefore a belief that the starvation and withholding of fluid prevents the mechanical stasis of the circulation in the intestinal coats, which appears to me to be the initial stage of the fatal process of peritonitis, and this preventive measure I endeavor to assist by stimulating the peristaltic movement. If this mechanical stasis does occur it originates always in the transverse colon, and I cannot help seeing in this the agency of the great omentum, and therefore my first efforts are directed to this part of the canal in the form of stimulant enemata. I have tried a vast number of different kinds of enemata—some suggested by my own thought and others suggested by ingenious friends—but I have always gone back to soap and turpentine. It is the business of any nurse watching one of my abdominal sections to note every six hours a set of four conditions: (1), the passage of flatus per anum; (2), the pulse; (3), the temperature; (4), the occurrence of distension. So soon as the passage of flatus per anum is freely and naturally established our anxiety ends, though our watchfulness is unremitting. The want of such passage for twenty-four hours after an operation, especially if accompanied by the slightest suspicion of distension, is dealt without fail by the nurse herself, on her own responsibility, by the administration of a turpentine enema, unless she has been especially warned not to give it for some special reason, such as a rent in the rectum. If the turpentine does not answer the nurse reports, and a mild saline purgative is ordered—generally a seidlitz powder—and this is repeated every four hours until it acts. If there should be any especial anxiety, such as the occurrence of vomiting or the presence of a clamp, 5 grains of calomel are given instead of the seidlitz powder."

In presenting Mr. Tait's views we have quoted freely and extensively from his article referred to in the preface of this paper. This was necessary to fairly present his ideas, and to avoid the errors which so many have unconsciously made, and which has compelled Mr. Tait to frequently deliver himself of protests at the many times, and in the many ways in which he has been misquoted and misunderstood.

In conclusion, I beg to offer a practical hint that has served a good purpose in cases where the usual means have failed. Although the nature of the exact production of abdominal distension is still unsettled, its influence upon the unfavorable termination of the case cannot be doubted, and in this we believe that all will agree with Mr. Tait that it is all important to "take time by the forelock," and use most of our energetic efforts before the trouble has gained too much headway.

In two abdominal hysterectomies, where the stomach absolutely rejected everything that was given, and where enematas of soap, turpentine, salts and glycerine had been used without effect, the passage of flatus and the successful ending of the cases was finally brought about by high enemata containing large doses of the oils of turpentine, caraway, fennel and peppermint, in the form of an emulsion. Where the stomach would tolerate any of these carminatives, we believe that much good could be accomplished by their use.

I have been unable to find any previous mention of the use of carminatives other than that of turpentine in relieving such distensions, and, from the excellent results obtained in the cases just mentioned, I believe carminatives, properly used, are capable of rendering efficient results, not as substitutes, but as adjuvants to our means now at hand.

DISCUSSION.

Dr. F. W. Samuel: Anything that Mr. Tait says in a clinical way of course attracts our attention. An admirable paper was written upon this subject four years ago by Roswell Park, where he laid great stress upon the liver, as being the most important organ to attack in such cases as this, the bile having, as he believed, an antiseptic action. It is my opinion that we can never cure post-operative peritonitis by purging our patient; there are many instances in which this has been proven. I also differ with Mr. Tait's views as to the nervous system being the cause of peritonitis; I believe the starting point is most frequently in the intestines; that it is an intestinal toxemia with which we have to deal.

I heartily indorse the treatment suggested by Dr. Schachner, and believe that if a patient upon whom an abdominal section has been performed shows evidences of the passage of flatus in twenty-four hours, and has an evacuation from the bowels in forty-eight hours, she is on the road to recovery. In those cases where vomiting and disten-

sion of the abdomen occur early, and we have high temperature and other signs of peritonitis, of course we know we have something serious to deal with.

Dr. J. W. Irwin: In the presence of so many surgeons who have done so much cutting and mutilating of patients, especially women, it is a very serious thing for a general practitioner to stand up and discuss the subject of peritonitis at all. I am not going to criticise the paper of Lawson Tait, because he evidently knows a great deal more about it than I do. But his paper, to say the least, is a very instructive one, and the essayist in preparing his resumé of that paper has brought to our minds two or three points of considerable interest.

First: He alludes to Lawson Tait's conclusion as to peritonitis originating in the nervous system. We must accept this view with considerable assurance, inasmuch as Lawson Tait has been a very close observer, and a very conservative surgeon.

Second: Another point the essayist refers to is that too much bile will cause the bowels to act. I would also suggest that too little bile often causes the bowels to act. We have an illustration of this in cases of hob-nail liver. So if the bowels act from the presence of bile, and act without bile, I do not know whether we have gained any information or not.

The next point he refers to is the ebb and flow of the blood current as having something to do with causing peritonitis, and he intimates that bacteria seems to be the cause of peritonitis, rather than, as Lawson Tait suggests, nervous influence of some kind. After an experience in one thousand cases of peritonitis, certainly Lawson Tait, with his extraordinary ability, is better prepared to make a statement of scientific value than others who have had very much less opportunity of observation. I do not mean to underestimate the essayist's remarks, as he has evidently looked into the matter very carefully.

In this connection we must remember that the alimentary canal is a very peculiar structure from beginning to end. Let us take, for instance, the process of digestion, what is it but bringing the dead to life? we cannot do that outside the body. We take food into the mouth and masticate it, thence it goes into the stomach, then into the intestines; finally it is taken into the circulation in the form of chyle, to make up living tissues, a process which cannot be carried on anywhere except in the living body. We cannot convert death into life outside of the living body. Hence, there must be some nervous influence along the alimentary canal, coming in contact with the food; just what this influence is we do not know. This being true, may we not as reasonably suppose that the nervous system may be a factor in the causation of peritonitis, as well as in the process which brings death into life? The statement, coming as it does from a man of so large an experience as Lawson Tait, we must necessarily support as far as we can reasonably do so—when he holds that the nervous system may play an important part in bringing about peritonitis.

Dr. J. F. Barbour: Referring to the question of relieving distension of the intestines by gas: I had an experience recently in which I learned something which perhaps might be of service to others. I was called to see a case of extreme distension of the intestines with gas, very chronic in its character. I tried everything that I could think of, and everything that was suggested by ingenious friends, without any relief. Finally, someone suggested the use of sulphur. I gave this in half teaspoonful doses, administered dry on the tongue, and found that it very soon caused a free passage of gas. Of course relief followed. I make this suggestion so that if such cases are encountered by any of the members they may try sulphur. I have never heard of its use before for this purpose, and certainly in the case to which I have referred, it acted extremely well.

Dr. Louis Frank: I take issue with Lawson Tait, not from any personal experience or observation of my own, but from the fact that other men of equally as wide experience, who are equally as close observers and as good clinicians as Lawson Tait, have found and positively demonstrated, as we have also done in experimental work, that peritonitis is of bacterial origin. No doubt Mr. Tait is correct in part, that the nervous system is involved in this trouble, but I believe that it is due to the action of bacterial poison directly upon the central nervous system. To the action of this bacterial poison is no doubt also due the excessive secretion of bile, it probably exciting the liver cells to increased activity, thus increasing the flow of bile. And we know it is a fact that distension occurs in these cases, also that the bile flows very easily and in large quantities into the stomach, as indicated by the vomiting. The paralysis of the bowel that occurs is in my mind also due, in all probability, to the action of the bacterial poison directly upon the central nervous system. We know that when paralysis once occurs in those cases where there is marked distension, the distension always following paralysis, that nothing we may do will affect it in any way, not even the most violent purgatives; even croton oil, when retained by the stomach, has no appreciable effect. I have seen cases of peritonitis where even five drops of croton oil which was retained by the stomach had no effect. In this case there was also absence of the facial expression which we find to be characteristic of peritonitis.

The introduction of a foreign substance into the peritoneum itself will set up a certain amount of, we may term it, an aseptic inflammatory condition, that is, an increased flow of blood to the part, also an increased flow of the white blood corpuscles as a natural result. It is probable in the early stages of peritonitis there is a considerable quantity of fluid poured out; that the current is really reversed, and that may, and probably does to some extent account for the extreme thirst that we observe. It is also a fact that the administration of an enema of warm water—one or two ounces—into the bowel, will to a marked degree control the excessive thirst, the condition of the lower part of the bowel being the reverse of what it is in the remainder of the intestines.

Dr. T. P. Satterwhite: In all cases where there is distension of the bowels it has occurred to me that more than likely Lawson Tait's theory is correct. That a fæcal evacuation cannot be obtained in cases where there is marked distension, is because there is paralysis of the bowel. No amount of irritation by croton oil, which has been mentioned, or any other irritant brought into the intestines will cause the bowels to act. There is no peristaltic action because paralysis of the bowel exists from the distension. Patients are often unable to empty the bladder because of marked distension of that organ.

Dr. F. W. Samuel: Some time ago I did a cholecystotomy upon a gentleman aged sixty years. Sixty or seventy calculi were removed, and the patient put to bed in good condition. At the end of thirty-six hours he developed symptoms indicating that he had peritonitis. He never vomited, and not one particle of flatus passed, although he had great distension of the bowels.

Dr. Frank has suggested that possibly the bacterial infection stimulates the liver cells to increased activity, causing bile to flow in greater quantities. It has been my observation that if we can get a free flow of bile, that our patients are usually relieved of the distension. It has been my impression, also, that distension causes the paralysis.

Dr. Aug. Schachner: I think we can, in a large measure, account for the distension and also the paralysis, when we consider the minute anatomy of the intestinal wall. We have here two plexuses of nerves—the Auerbach's plexus in the muscular layer, and the Meissoner's plexus in the submucosa. The paralysis is largely brought about by the inflammatory exudate that occurs in the wall of the intestine. When the distension occurs primarily it is probably due to paralysis of these plexuses. Later on, if the bowels become distended, the distension may have something to do with the paralysis. As Dr. Satterwhite has mentioned, we have an illustration of this in distension of the bladder.

Of course we all know Mr. Tait's position in regard to the germ theory. He violently opposes what we all recognize to have been almost beyond question.

As to the part the nervous system plays in the process of peritonitis, he leaves a very large space to be filled when he says it is due to the nervous system. Certainly there must be a cause which brings about these nervous phenomena.

CORRESPONDENCE.

IMPRESSIONS OF THE NEWPORT MEETING.

MESSRS. EDITORS:

It is too late to supply news of the meeting of the American Institute of Homœopathy, yet time enough to put together a few ideas and conclusions gathered as a spectator. We had some difficulty about reduced fares, the railroad officials never having heard of the Institute. Coming back, the Fall River Line people seemed to be in equal ignorance. Possibly the fault of the Trunk Line Association, possibly of the Transportation Committee of the Institute. On the Fall River boat, going, symptoms of the Institute became first apparent in the groups of medical men wearing the characteristic bronze button. Being barbarians from a strange country, we were interested in knowing and estimating men whose writings had made their names familiar, notably among them Drs. Comstock, Bartlett, Burt, James and Van Denburg.

I would much prefer to meet a man before reading his writings. I then know whether his experience is reliable and his work of value. This does not refer to the gentlemen mentioned.

Newport is hardly an ideal place for the pockets of a backwoods practitioner; a few days' sojourn is liable to deprive him of the possibilities of any more holidays for the year.

However, the temptation to put up at the "Ocean" was great, for living away from it was like being isolated. We were tempted, fell, and had to return home earlier in consequence.

Newport is pretty, very pretty, but the "Ocean" is a trifle hard to find.

The Friday evening reception was a very pretty affair, the brilliantly lighted balconies and halls, the pleasant strains of the music, the charming toilets of the ladies, making an entirety of great attractiveness. The lay portion of Newport forgot to go to bed, and were stationed at the other side of the hotel fence.

An inland man's experience with sole leather, otherwise called imported clams, does not lead him to expect much with that article as an center piece, yet the excursion to Rocky Point and the clam bake there must be classed as the most delightful of the local entertainments. Fresh clams steamed in seaweed must be swallowed to be understood and appreciated. I was struck with the excessive thirst sea trips develop in doctors.

The information bureau was not perfect, and I personally was unable to hit on the few things it may have known. The clerks were excessively gentle, polite and uninformed. The fault was probably mine in requiring information not on the official knowledge list. One thing I wanted to know was from whom I could get a ticket out out of Newport while money was still left to me.

It is a great pity that a central office was not taken and a clerk kept there from 8 A. M. until 10 P. M., with business instructions, to deliver mail and know everything. The centers of information were too changeable at Newport for a member's peace of mind.

The meeting place in the church was a little far from the hotel, but answered admirably.

I have had surgery drummed into me in New York, in Montreal and in Europe until I was tired of surgery. I went down to Newport in the hope of a blessed relief, but again found surgery in evidence and therapeutics in the background.

In the American I find a resemblance to the French, the same pursuit after something brilliant that shows well, the same dislike for quiet, obscure study and research. Much surgery and little medicine and materia medica.

The practitioner can learn surgery in a thousand places, but advances in Homœopathic materia medica at such meetings as these only.

In the materia medica section, I was struck with Dr. Frank Kraft's clear paper on the mental picture derived from the various senses, grouping itself in the observer's mind as peculiarly suited to a fixed and certain drug.

The discussion was animated and nearly annoyed Dr. Kraft.

On his election to the office of President, Dr. Dudley remarked that he was glad no wire pulling had influenced his election. I was sorry to infer that wire pulling had influenced the election of former presidents. Dr. Custer will scarcely feel grateful to the two Canadian members, as their votes cast for Dr. Dudley lost him the election. We knew Dr. Dudley by his writings only, a manifest moral.

Dr. Richardson, in proposing Dr. Guthery as Vice-President, became slightly tangled up in his metaphors of the Sunny South. He was seconded by a gentleman from the West who took Dr. Richardson seriously, and the metaphors for facts.

In Dr. McLachlan, as Vice-President, the Institute has

done itself proud. A more earnest, able, honest, unsuited for political diplomacy man it would be hard to find.

In the insurance debate, many of the members being insurance examiners, the debate was spirited and sometimes slightly morose. Dr. James contended that the Institute had no right to interfere in the business of private corporations, but when another member stated that the companies asked the direct question as to system practiced, and rejected if Homœopathic, the argument lost weight. The question seems to stand thus: Some companies accept men if competent, disregarding school; others reject without regard to competency any man practicing Homœopathy.

The Institute, as a powerful body, will probably be correct if it financially coerces the latter division into altering its present state of mind.

I was much surprised to find so many wearing the red badge of seniors.

Our admission as Canadians was for some time in jeopardy, the censors being in doubt as to whether the Institute was National or International. The latter finally prevailed.

I cannot resist tacking on here an expression of pleasure at being able to revisit my old hospital on Blackwell's Island. More than any man I have ever met Chief Stewart seems to possess the power to assimilate every hand, eye and head which comes under his sway, for the beautifying and perfecting of the great hospital he is developing, for the purpose of demonstrating how low a death rate may be kept, when the treatment is along the lines of the Law of Similars.

H. M. PATTON.

Montreal.

NORDAU'S "DEGENERATION."

After a careful and labored reading of this book—we say labored because the author has written himself out when half way through his self-allotted task—our impressions of the book are bad, and of the author worse. He has so much to say and so little to give his readers. It is a significant fact that Lombroso, whom Nordau seems so proud to call his master, could give us the far reaching results of his great labors in a volume half the size. And truly I know no better way to see Nordau in his true light than to read Lombroso's "L'Homme Criminal" at the same time. In this book we see and feel the work and spirit of a truly scientific man, one who for years has been content to patiently investigate and collect a great array of plain, dry facts, if such details could ever be dry, before he saw fit to give the world the far reaching conclusions to which they seemed to point. He shows no rancor or impatience with his subject. Criminals and their lives and characteristics are described in a simple, quiet way, and the reader is ever conscious that the writer is investigating and teaching his subjects as a naturalist studies any branch of biology, uninfluenced by those feelings of repulsion and disgust which affect the passer-by. And it is largely by virtue of this feat Lombroso has achieved so much from his labors. He has been long the impassioned investigator before giving the world his conclusions, and we say this without accepting all his conclusions. See, for example, his paper on Atavism and Evolution in the *Fortnightly* for July of this year. But in the eleven years which have gone by since his book appeared, he has seen an immense impetus given to the study of crime and anthropometry as a result largely of his labors.

But what a different book is this "Degeneration." In the first place, whatever there is of scientific value is borrowed from the labors of others; not one fact in the book can be adduced as the result of his own work. The great mass of the book is taken up with long-winded literary and philosophical criticisms, and written in a spirit which would destroy any influence it might have if based upon any accepted canons of literary criticism. You can see the man's sneer and self-sufficiency as he calls this one a fool and that one an imbecile and driveler. He has portrayed himself better than his degenerates, and the portrait is not a pleasing one. Now, it must be admitted that a work which has called forth so much comment, which has been translated into a foreign language, has at least novelty and sensationalism, if not force, to recommend it. That it shows the labor of an immense amount of reading cannot be denied, and the author seems so anxious for his readers to see this. That he knows thoroughly the literature of Lombroso and his school, and that he has succeeded in showing the public his varied learning, in the ordinary acceptation of the term, must likewise be admitted. But now the author has received his full due. He has produced certainly a most sensational work. He has succeeded in giving himself notoriety, if not of the same order as Oscar Wilde parading down Pall Mall. Poor, degenerate Oscar! Notoriously sane Nordau! What a contrast! And yet perhaps they may have something in common.

The relationship between genius and degeneracy has been so much more ably treated by others; Lombroso himself has written well on the subject, and Galton, in England, has done even more. It is a subject which has attracted the best minds for many years. Nordau has added absolutely nothing to our knowledge here. He has undertaken the most difficult task of characterizing degeneracy through literary and artistic form and expression. It is very evident that his mental and emotional constitution is far removed from that sympathetic and well attuned nature capable of the higher poetic and artistic appreciation and criticism. His own attempts in literature proper are very sorry ones. Could he pick out for us a list of his own favorites in literature and art he would show us more clearly I think, how ill adapted he is to his task. It becomes self-evident that he can see nothing in Walt Whitman, William Morris, Rossetti, Swinburne but degenerate effusions. So soon as he discovers anything in their writings which does not appeal to his hard, colorless and analytic mind he immediately sets it down as drivelling rot; no expression can be too severe for him, and an *expede Herculem* judgment seems quite sufficient.

We can safely predict that the best of these writers will live long after Nordau will have been forgotten, and by virtue of their poetic and artistic creative power, associated though it may be with an aberrant or degenerative nature. And Nordau is constantly taking it for granted that their popularity shows degeneracy in their admirers or followers. His *a priori* reasoning and *l'idée fixe* are ever carrying him away. It seems quite impossible for him to separate the man as he is found in his works from the man as he is found in his own home and surroundings. We can admire a vase of Cellini without sympathy with the man. The world can rejoice over the musical productions of Wagner and leave his degeneracy to the alienist. Those who love the essentially musical element in poetry can admire Swinburne, totally regardless of the degenerate side of the man, and not be themselves degenerated for their admiration. We even venture to assert that the literary, artistic and musical taste of the day is better than it ever was, that the canons of criticism in the realm of the imaginative and creative are truer and better established, and that the general moral tone in literature is also better. There is a world outside the *Moulin Rouge* and even the Paris *Salon*, and the Parisian *boulevardier* and the sipper of absinthe on the curbstone, are not types of the real man of the day, are not even *fin de siecle*, a term which Nordau thinks has come to us from their degenerate age, is characteristic of it, and which verily makes him bristle all over.

The trouble is that Nordau has not been able to study crime and degenerates and keep his head too. He passes through a mad-house and still hears in the streets its wails and mad laughter. The faces and heads of the hurrying crowds are all wrong. Bedlam is let loose. We believe that the careful student of Lombroso and his school looks with much hope to the future of the criminal world; Lombroso may yet do for crime what Pinel did for the insane. A better knowledge of crime will establish a science of prophylaxis and hygiene which may do even more for the "delinquent man" than it has done for general medicine. But the men who are doing the good work are not of the Nordau stamp; a very different spirit animates them, and the next ten years will probably give us a mass of literature and accumulated facts which will form a solid basis for criminal prophylaxis, hygiene and treatment.

E. R. CORSON, M. D.

Savannah, Ga., July 17, 1895.

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CAPITAL PUNISHMENT.

THE determination and persistency with which Dr. Buchanan, the alleged wife murderer, through his counsel, fought for his life, availing himself of every technicality of the law, brought out an array of facts in reference to the uncertainty of even the strongest circumstantial evidence and the fallability of human judgment, startling to the general public. Cases are by no means uncommon where men consigned to the prison cell have been afterward proved innocent, and where men also have paid the penalty of their life for a crime of which they were entirely innocent. To the shame and disgrace of the legal profession, it may be said, there is often a greater desire to win a victory, though that victory may be the reputation and honor of an innocent man, than to get at the truth. In all cases of circumstantial evidence, there is a possibility of error, and the question may well be asked is it not better that ten guilty men shall be saved, than that one innocent man shall die, his name handed down from one generation to another linked with infamy?

Dr. O'Sullivan, one of the counsel of Buchanan, bringing to his work as a lawyer the results of his studies as a physician, gives a very interesting illustration of the action of electricity in electrocution, closing with a few well chosen words in reference to the death penalty.

He says: "A locomotive and a bee may travel at the same rate of speed, say twenty miles per hour. That speed would, in the case of electricity, be the voltage. Should a person come in collision with the bee, little damage would ensue, though the obverse would be the fact in the case of the locomotive. Wherein lies the difference, both having the same speed or voltage? It lies in the volume of the mass or body of each. This would be the amperage in the case of electricity, and if we multiply the speed or velocity by the weight or volume of the mass or body, we get the striking force, or what is termed in the case of electricity a watt, which is defined as the unit of energy or working power.

"Fearing the foregoing very simple *fac simile* may not be sufficiently lucid, we can measure this energy by a better and more accurate method. Taking the current employed on Dr. Buchanan, 1,760 volts, 8½ amperes. If we multiply the former by the latter, we have 1,760 x 8½ —equal 14,960 watts. Now, it has been demonstrated by electricians that 746 watts equal one horse power. If we divide 14,960 watts by 746 watts, we get the potency of the current employed to kill Dr. Buchanan as equal to 20 horse-power. Such power suddenly liberated in a human body could have but one result—to kill. It did kill, the death being sudden and painless.

"Deaths from electric shock, either accidental or otherwise, were, until a short time since, little understood as to their form or mode, and it was not until the celebrated French scientist D'Arsonval advanced the theory that death was induced by paralyzing the respiratory center in the brain, and, by thus suspending respiration causing death, that the mode of death was comprehended. He verified his theory by restoring to life those who were apparently dead through electric shock by employing artificial respiration, in using the old Sylvester method for this purpose, such as is used in almost every case where death or suspended animation is the result of drowning.

"As long as our lawmakers in this State deem it necessary to adhere to the barbarous method of taking life in expiation for the crime of murder in its first degree, they cannot find any method of killing human beings (that is known at present) any more humane, painless, or rapid than that now employed—electric shock.

"It has been stated in extenuation for our adherence to mediæval methods of punishing those convicted of murder in its first degree, that by employing some ignominious mode of killing them others contemplating crime of like character will be inhibited. This is a fallacy—pernicious as it is false. Those who in cold blood contemplate murder, carefully plan, arrange details and take every precaution to obviate detection. When they put their nefarious design into operation they do so with the fullest belief and firmest confidence that detection is an impossibil-

ity, and they never think of the consequences of detection. When they are finally charged with the crime they are simply surprised or dumfounded. The other group, who commit the crime of murder in its first degree while 'in the heat of passion,' never consider the consequences when so enraged. In either group the death penalty does not inhibit."

Swedenborg said that the spirit of the executed man very often frequented his old resorts, producing impressions upon the minds of the living brought under his spirit influence which often led to the repetition of the crime. This fact has been frequently demonstrated in history, one murder quickly following another. Napoleon evidently believed that some kind of influence was around the location of a violent death which might affect the living. When told that several suicides had been committed in a certain sentry box, he gave orders to have the box destroyed and another one erected at a different place. The remedy was effectual. Psychology, in its daily unfoldings, is proving not only the entity of the human soul, but that its influence for good or evil reaches out from its spirit home to its old material surroundings, and it is certainly not beyond possibility that the malign influence of the murderer may produce its effects upon the living.

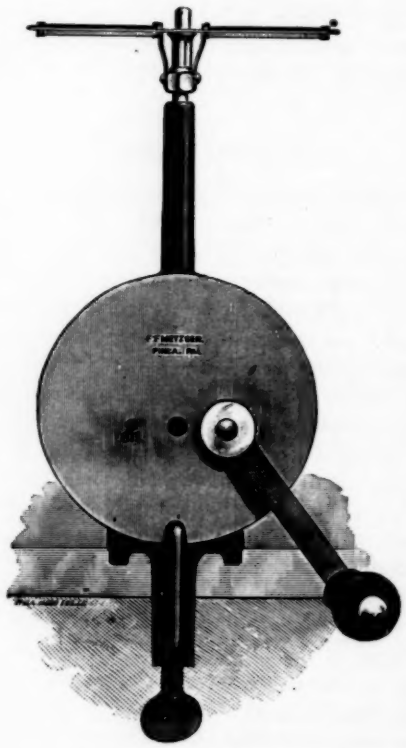
THE METZGER CENTRIFUGE.

THIS instrument is described by the makers as "A new instrument for the volumetric analysis of the red and white blood corpuscles, the precipitation of the sediment of sputum and urine, the percentage of fat in milk, and for general clinical, microscopical, physiological and bacteriological research." While the writer, as yet, has not had occasion to apply the centrifuge to all of the uses here enumerated, he has made daily use of this and other centrifugal machines in clinical work, and is prepared to make a general statement of their relative merits. At the outset it is noticeable that the Metzger Centrifuge is eminently superior in point of construction. In place of the noisy, jerky machine, requiring a great effort to produce a speed of 1,000 revolutions per minute, is found a machine of compound gearing, so combined that, by a much slower revolution of the handle crank, and with only a moderate exertion, 2,000 to 10,000 revolutions can be obtained, varying with the load that is carried. This depends in part upon the combination of the gear-wheels, but in part, as well, upon the diminished friction which the superior construction has attained.

A single point in the construction is perhaps open to suggestion, and that is in reference to the handle crank, which is rather slight and might be bent if the machine is run with very great exertion, when carrying a heavy load.

The instrument is well adapted for the rapid precipitation of sediments by means of centrifugal force. To this end various attachments are provided: the hematocrit, the urine sedimentor, and the sputum sedimentor.

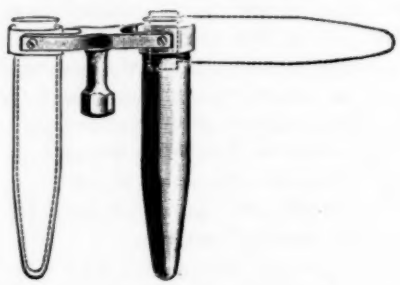
The hematocrit attachment (adjusted to the instrument in the cut) consists of a metallic frame, carrying two graduated capillary glass tubes, into which a fresh drop of blood is drawn by suction. These are revolved for one minute,



making ten thousand revolutions, which causes the red corpuscles to settle to the distal extremities of the tubes, while the white cells occupy a position between the red corpuscles and the liquor sanguinis. The amount of space occupied by the corpuscles indicates the number present. The writer has not had occasion to use the hematocrit attachment for this purpose, but from a general acquaintance with the instrument believes the device admirably adapted to accomplish the results described. And since, in the estimation of the number of corpuscles present extreme accuracy is neither necessary nor of particular advantage in clinical work, the method which the use of this instrument affords can be accepted as

a decided advance in the technic of blood examination. The attachment is the device of Dr. Daland, of Philadelphia.

Perhaps the most practical attachment of the Metzger Centrifuge is the urine sedimentor. With only moderate exertion, amply sufficient centrifugal force is produced to separate the most delicate and resisting sediment from the urine. In the examination of urine sediments, and especially in the search for urinary casts, the attachment is, therefore, invaluable. In this connection it is well to remember that the greatly increased rate of rotation afforded by this instrument is inestimably more effective in producing the complete separation of a sediment than the continuance of centrifugal action through a much longer time at a lower rate. In other words, speed far outweighs time, as a factor in producing a given result. The urine sedimentor is shown in the cut. A single suggestion regarding the shape of the tubes might be made. Those that converge more abruptly are easier to clean, though



it is true that this shape would not serve as well for quantitative methods. For this purpose, however, the writer questions the value to any considerable extent of any method based upon this principle. Without entering into a discussion of the subject here, it is the writer's conviction, from an extensive experience in quantitative urine analysis, that any method of measuring the volume of a precipitate is of value for quantitative purposes only to a very limited extent. In fact, such results can be considered nothing more than a refined guess at the composition of the urine. Where quantitative results are to be seriously interpreted they generally need to be more than approximately estimated.

The sputum sedimentor is composed of tubes 50 m.m. long, with 2½ m.m. lumen, which are fitted into the hematocrit frame. Eor the separation of sputum sediment in general microscopical examination, the sedimentor is certainly very valua le, and, on account of the high speed that it is capable of producing, without any considerable effort, it readily surpasses any other device offered for this purpose. There is, however, a serious objection to the use of the centrifugal method for the separation of tubercle bacilli, since it is sometimes true that the sputum and tubercle bacillus are of the same specific gravity.

Moreover, in a series of estimations, the rubber washers offer a possibility of transferring the germs from one specimen to another.

Considering the Metzger Centrifuge in all its uses, it is not recommending it too highly to say that it offers such an advance among such instruments for separating sediments that it can with great advantage replace all other centrifugal machines in the hands of any person foremost in modern scientific methods of clinical diagnosis. That it is not perfect in every detail does not conceal the fact of its great utility and superior construction. It is only by accepting the increased facilities for the most effective work, which the use of such an instrument affords, that the physician of to-day can hope to keep pace with the methods of scientific practice.

PROF. HUXLEY.

THOMAS HENRY HUXLEY, one of the most far-reaching and analytical minds in scientific literature, is no longer an agnostic, a word which he originated, but has passed beyond the unknown, where doubt has given place to certainty. "The more I think of it," says Ruskin, "I find this conclusion more impressed upon me, that the greatest thing a human soul ever does in this world is to see something, and tell what it saw in a plain way." All do not see alike, and yet the trains of thought started by honest and thoughtful minds, intent only on the unfolding of truth, and the lines of investigation marked out, must lead, sooner or later, in the great crucible of human thought to positive results. Those who see great gulfs fixed in Nature may live to see them filled up, if not those who come after them will demonstrate that there is no break in Nature, for, as Drummond has tersely said, "to break up Nature is to break up reason, and with it God and man."

Huxley had the rare faculty of giving his reason for what he saw in a clear and logical manner. The logic was at times at fault because he sometimes did not see correctly, but there can be no doubt as to his honesty, and that his studies have opened wide fields for investigation.

In speaking of matter and spirit, Huxley says: "After all, what do we know of this terrible matter except as a name for the unknown and a hypothetical cause of our states of consciousness? And what do we know of that spirit over whose

threatened extinction by matter a great lamentation is arising, like that which was heard at the death of Pan, except it also is a name for an unknown and hypothetical cause or condition of states of consciousness? In other words, matter and spirit are but names for the imaginary substrata of groups of natural phenomena. In itself it is of little moment whether we express the phenomena of matter in terms of spirit, or the phenomena of spirit in terms of matter; matter may be regarded as a form of thought, thought may be regarded as a property of matter. Each statement has a certain relative truth."

Huxley's estimate of his life's work, as that work was nearly ended, is best given in his own words:

"The last thing it would be proper for me to do would be to speak of the work of my life, or to say at the end of the day whether I think I have earned my wages or not. Men are said to be partial judges of themselves. Young men may be, I doubt if old men are. Life seems terribly foreshortened when they look back and the mountain they set themselves to climb in youth turns out to be a mere spur of immeasurably higher ranges, when, with failing breath, they reach the top. But if I may speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these: To promote the increase of natural knowledge and to forward the application of scientific methods of investigation to all the problems of life to the best of my ability, in the conviction which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind, except the veracity of thought and of action and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features is stripped off.

"It is with this intent that I have subordinated any reasonable or unreasonable ambition for scientific fame which I may have permitted myself to entertain to other ends; to the popularization of science; to the development and organization of scientific education; to the endless series of battles and skirmishes over evolution; and to untiring opposition to that ecclesiastical spirit, that clericalism, which in England, as everywhere else, and to whatever denomination it may belong, is the deadly enemy of science."

Prof. Huxley's contribution to scientific literature commenced while he was a student of medicine, his first published article being in the *Medical Times and Gazette* on the outermost layer of cells on the surface of the root of the hair, which is now known as "the sheath of Huxley." In 1845 he received the degree of M. B. from the University of London, standing second on the list of honors in anatomy and physiology. As surgeon in the navy, the opportunity for pursuing his investigations in natural history led to the publishing of a series of very interesting papers on the lower marine animals in the "Transactions of the Royal Society." Retiring from the navy in 1854, he afterwards filled the position of Professor of Natural History in the Royal School of Mines, Hunterien Professor in the Royal College of Surgeons and Fallerian Professor of Physiology. A member of most of the scientific societies of Europe, elected Lord Rector of the University of Aberdeen in 1872, and later a Trustee of the British Museum, and a member of the Senate of the University of London, there was no honor in the gift of nations to men of science which did not come naturally to him. The decoration of kings and emperors was held in small estimation, that of Germany being refused because it was the gift, not of a scientific organization, but of an Emperor. Doubtless the early training of the great scientist in his medical studies contributed to the crystal clearness of thought and the close and searching logic shown in his published works. At the age of seventy, with his wife and daughter standing by his side, the spirit of the great scientist, philanthropist and Christian passed from its mortal to its immortal state.

VERATRUM VIRIDE IN PUERPERAL ECLAMPSIA.

CHLORAL has been strongly recommended in puerperal eclampsia, not only for its direct power in controlling the convulsions through its action upon the nervous system, but also by facilitating labor in assisting the dilation of a rigid cervix and increasing the contractile action of the womb. Its action is undoubtedly similar to that of morphine, but is thought by some obstetricians to be attended with less unpleasant after effects.

Dr. Davis, in an exceedingly interesting article read before the Alabama State Medical Association, at Mobile, April, 1895, and published in the *Alabama Medical and Surgical Age*, gives very important testimony in reference to the action of veratum viride in eclampsia, given hypodermically in twenty-five drop doses. This might be considered a heroic dose, but Dr. Davis quotes statistics of fifty cases in which it has been administered in eclampsia of more or less severity, and always with beneficial effect. In fact, the promptness with which the remedy acts is one great argument in its favor. Under its influence

the jerking muscles promptly relax, the bounding heart becomes quiet, the skin becomes moist, and by diminishing the flow of toxine loaded blood to the nerve centers, the death like coma disappears and is followed by natural refreshing slumber. Prof. Bartholow, speaking of the tolerance of the human system to this drug, says that fatal results from large doses have been extremely rare. Prof. H. C. Wood says, although veratrum viride is a remedy of great power, capable of producing the most alarming symptoms, he believes it to be the safest of all cardiac depressants and mentions cases where it has been given in teaspoon doses without unpleasant effects. Like every other drug the dose should be graded to the condition of the patient, but in Dr. Davis' experience twenty-five drops hypodermically given, is not only perfectly safe, but essential in puerperal eclampsia to produce the desired effect. After having obtained control of the convulsions he seeks to keep the pulse below 60, and to accomplish this, repeats the remedy internally in five drop doses as long as the necessity continues. If the convulsions occur in the last months of pregnancy, with disturbed vision, headache and other evidences of uræmic intoxication, the author uses the remedy only to hold the convulsions in abeyance until the fœtus is delivered by the induction of labor, and the more promptly this is produced the better. But even in these cases the beneficial effects of the drug are seen in the more rapid dilation of the cervix and the muscular expelling power of the womb.

STUTTERING.

DR. COLEMAN thinks this defect of speech, so annoying and apparently so beyond a person's control, is in fact very easily remedied, only requiring patience, practice, ordinary intelligence, a knowledge of certain physiological facts, and a careful observance of their action. For the production of perfect speech, three factors, each governing its own set of muscles, and all supplied by the same nerve energy, must be set in motion simultaneously. These three factors are the respiratory apparatus, to supply the wind needed for the production of sound; the larynx, converting the blast into definite sound, and the musculation of the tongue, lips and palate, converting sound into articulate words. If these factors are brought into action simultaneously with adequate force, the result is normal voice and speech. If the nervous energy is irregular the harmony between the three factors is broken, and stuttering is the result. Stuttering might then be defined as a nervous or nervo-muscular abnormality. To conquer this lack of harmony in the three factors and make them perform their work in perfect unison, Dr. Coleman tells us the chest should be well filled with air before any attempt is made to speak, and deliberately refilled and kept full as long as speech is continued. If the chest is weak expand it by proper exercise. Always speak in a clear and resonant voice. Mumbling, whispering and low speech are great incentives to stuttering. When these few rules are learned and practised with the utmost care day after day and week after week, until the supply of nerve energy to all the factors is simultaneous, success will be certain, requiring no further effort.

OVARIOTOMY AT SIXTY-NINE.

DR. AUGUSTIN H. GOELET presented at the May meeting of the New York Obstetrical Society a large ovarian cyst which he had removed from a patient sixty-nine years old. The case was reported to show that advanced age does not contra-indicate cœliotomy in these cases, also to illustrate the importance of careful preparation of the patient for the operation to overcome intestinal distention and facilitate its execution. When the patient first came under his observation there was great distention. She was placed in his sanitarium for three weeks prior to the operation and put upon a restricted diet. At the time of the operation there was absolutely no intestinal distention. In consequence the operation was completed in fifteen minutes, and the patient made a rapid recovery, without a single unfavorable symptom.

WE were lately informed by the London *Daily News*, in one of its letters from Paris, "that rabies has been ascertained to be an antidote against snake poison," and the writer goes on to say: "Dr. Roux conjectures that all animal venoms are chemically alike, and that there is truth in the Hahnemann method of curing like by like." Shortly afterward, the editor of the *Homœopathic World* came out with the following: "In our estimation the present *furore* in favor of the new treatment of diphtheria by the serum of immunised animals is not altogether ill-founded. The serum and the animals will, we believe, be found to be entirely superfluous, but the principle will remain—the manufacture from the virus by some process of attenuation of a medicine antidotal to the same poison when at work in an organism. The principle is the principle of Homœopathy, and the merit of it belongs to Hahnemann and his followers." These sentences may

be called an amplification of the saying attributed to Dr. Roux, and the last of them, we are confident, conveys a statement whose correctness will soon be universally acknowledged. Dr. Clarke, after describing the process by which the diphtheria antitoxin is produced, points out that "the animal's blood is altered; it does not contain the toxin in poisonous quantity, but it does contain what amounts to a tolerably high attenuation of the toxin, and when the serum of this animal's blood is injected into a human patient suffering from diphtheria, marked curative effects are said to follow." Tetanus antitoxin exercises protective influence in the proportion of 1 : 100,000,000.

Should the use of these nosodes prove finally successful, then, through the action of the dominant school itself, the prejudice against highly attenuated remedies must cease to prevail, and the strongest remaining obstacle be swept from the path that leads to the restoration of medical unity

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SOME of our Illinois friends, we see, have been hard at work endeavoring to secure the erection of a Homœopathic insane hospital in the western part of that State. A bill appropriating $400,000 for this purpose was introduced into the Legislature, and Dr. C. E. Fisher, president and editor, has addressed a letter to a prominent Senator in advocacy of the same. He advances the usual arguments: "No insane hospital in this State for our patients. We number," etc. "We pay one-third of the taxes. We are represented in New York, Massachusetts, Minnesota, California, Michigan and elsewhere, and in all these institutions the results show that the Homœopathic system of practice is the best for the insane. The percentage of recoveries is larger, and the percentage of deaths smaller."

Now, we have not the slightest wish to impugn the accuracy of these statements, and we would place no obstacle in the way of our Hahnemannian brethren in obtaining all they ask for. At the same time, however, we cannot but regret that their appeals, so far, should be based on nothing higher or more comprehensive than the convenience of their clientage and the number of votes they may be able to control. They contend that the superiority of their psychiatric methods is established by overwhelming statistical evidence. In other words, that it is *mathematically demonstrated.* Will they allow us to ask: Why, then, assuming this to be the case, are not these incontrovertible facts and figures put into proper shape and laid before the Legislatures and Governors of all the States maintaining insane hospitals? Why is not pressure everywhere exerted upon lawmakers and officials until they are compelled first to examine into the question, then to acknowledge the "demonstrated" truth, and finally to act upon it? What would inevitably follow (with the above proviso) if this course were adopted? We answer: Not merely the opening of a hospital in each State for the accommodation of those who (or whose friends) might happen to prefer a certain system of practice, but that *every government asylum in the land would ultimately be placed under Homœopathic management.* This would occur, both because the State is unquestionably bound to provide for its mentally afflicted wards, whatever treatment is ascertained to afford the best possible chance of life and recovery, and because the performance of this duty would result in a considerable saving of expense to the taxpayers. Nor, in this instance, would discussion be embarrassed or a decision prevented by the rival claims of medical sects, since Homœopathy alone among them all makes any pretence of directly influencing the course of insanity by drug medication. On the one hand, "mathematical demonstration;" on the other, negative assertion, backed by mere *a priori* reasoning! Who can doubt the issue? What an opportunity is here presented for proving before the world the correctness of the law of similars, by an *experimentum crucis* on the largest scale! Yet, with the exception of a sentence or two in a western journal some years ago, we have never met with even a passing reference to the possibility of such an achievement. Apparently, either the Homœopathic leaders lack the courage of their convictions, or they think the pear is not yet ripe.

AN EASY METHOD OF BATHING IN TYPHOID FEVER.—Accumulated hospital statistics testify to the good results following the use of cold baths in typhoid fever. The same results are not obtained in private practice because of the opposition of the laity to the cold bath, and the impracticability of the process in the ordinary household bath-tub. Even with a portable tub there are serious disadvantages, such as the cardiac symptoms when raising a patient in the advanced typhoid stages. So says Dr. Wm. B. Noyes in the *American Medical and Surgical Bulletin*, and he suggests that a very practical and serviceable method is to use a rubber blanket; this is slipped under the patient, both ends and the sides raised nine or ten inches and bolstered up with any handy article, such as pillows, books, sand-bags, boards, etc. This constitutes a useful

impromptu bath tub. The blanket ought to be of double thickness, and as long as can be purchased. Special care must be given to arranging the corners. With this, enough water of any temperature can be used to partially or entirely immerse the patient.

With only two inches of water a cool sponge-bath can be given much more efficaciously than under ordinary circumstances. By firmly fixing the sides and corners almost any quantity of water can be used. It may be filled from the nearest faucet by a rubber tube, or a better method is to carry it in by pailfuls and pour it over the patient, beginning with tepid water and gradually decreasing the temperature until the desired coldness is reached. A neater method is to use a large "watering-pot," with a "sprinkler" attached. Such a bath is always grateful to a patient, and avoids the shock of a sudden immersion into cold water, as happens in the ordinary bath tub. The water can be removed without in the least wetting the bed, by siphoning, by using small pitchers, cups or sponges. Then the blanket can be dried, and either left in place, covered with a sheet, or better, removed and dried in the sun.

NO "AGONY" IN DEATH.—A writer in *Scribner's Magazine*—evidently a medical man—says that two ideas are very generally accepted which experience shows to be false. One is that the dying usually fear death; and the other, that the act of dying is accompanied by pain. It is well-known to all physicians that when death is near its terrors do not seem to be felt by the patient. When Nature gives the warning, death appears to be as little feared as sleep. Oliver Wendell Holmes has recorded his protest against the custom of telling a person who does not actually ask to know that he cannot recover. As that loving observer of mankind asserts, so must every one who knows whereof he speaks, assert that people almost always come to understand that recovery is impossible; it is rarely needful to tell any one that this is the case. Most sick persons are very, very tired. Sleep—long, quiet sleep—is what they want. I have seen many people die. I have never seen one that seemed to fear death, except when it was or seemed to be rather far away. Even those who are constantly haunted, while strong and well, with a dread of the end of life, forget their fear when that end is at hand. As for the act of dying—the final passage from life to death—it is absolutely without evidence that the oft-repeated assertions of its painfulness are made. Most people are unconscious for some hours before they die; and in the rare cases where consciousness is retained unimpaired until a few minutes before the end, the last sensation must be of perfect calm and rest. [Some have testified that it is exceedingly pleasant.] It is worse than cruel to add to the natural dread of death which oppresses the majority of us while in good health the dread of dying.

THE LATEST ACHIEVEMENT IN PLASTIC SURGERY.—At the Charing Cross Hospital, London, Mr. J. Astley Bloxam, the senior surgeon, recently performed one of the most remarkable operations on record. It appears that a few months since a young man without a nose asked the authorities whether they could obtain a real nose for him. To oblige the applicant an amputated finger of another patient was grafted on to his face, but it was found that amputation had caused the finger to die. The noseless man, nothing daunted, then agreed to the surgeon's suggestion that one of his own (the patient's) fingers should be cut off to furnish the nasal organ. But in order that the finger should not be wasted in the event of the operation being unsuccessful, the patient's arm was encased in plaster, and for four weeks he had to hold his finger to his face in the hope of its taking root. This it did. The finger was then taken off the hand, and now remains fixed as a nose. It has been manipulated so that it is no longer to be recognized as a finger, and the process of shaping it is being proceeded with.

CASH VALUE OF A HUMAN LIFE.—A recent decision by Judge Ricks, of Toledo, which we find reported in one of our exchanges, is worthy of notice. Suit for large damages was brought against the Ann Arbor railroad for the death of two employes.

Judge Ricks' ruling placed the value of a human life at $10,000, and his decision is of peculiar importance, because of the determining of the maximum sum recoverable. His ruling was substantially as follows:

"One of the most difficult questions for a court to determine is for a correct and just measure for damages in a case of this kind. It is hard to say that human life is not worth such a sum as the master has given in this case, because the records show these men were of excellent habits, fond and affectionate husbands, and in every way a help and comfort to their families and useful to the public. In a large number of States where the limit for the loss of life has been fixed by the Legislature, the sum of $10,000 has been fixed as

the maximum allowance to be made. This is a legislative construction of a fair maximum sum to be awarded in such a case. I think the court may properly, therefore, accept this concordant judgment of so many different State Legislatures as justifying it in saying that the maximum ought not in any of these cases to exceed that sum."

IN a recent description of an investigation of the body of David Hampton, who was electrocuted at Sing Sing, we gave the credit to Dr. Oertel, whereas the investigation was made by Dr. Augustin H. Goelet, of this city, and Mr. Kennedy, of Philadelphia, who were commissioned by the State for that purpose. At their request Dr. Oertel made the microscopic examination.

OUR attention has been directed to certain remarks in the February number of *Food*—overlooked at the time of their first appearance—having reference to "the editor" of this journal. The latter is charged with becoming unduly enthusiastic over some of Prof. A. G. Bell's inventions, inasmuch as he says that, when perfected, they "will add one more link to the chain of recent discoveries which is annihilating time and space and bringing us into direct and intelligent contact with the soul of the universe." Whereupon our all-accomplished critic observes that "the editor certainly excels both Edison and Bell, for we do not believe either of these men have (*sic*) ever thought of having a 'direct and intelligent communication with the soul of the universe.'" How admirably logical, as well as sarcastic! "The editor" of the TIMES *certainly* makes himself ridiculous in giving utterance to an idea which the editor of *Food* does not *believe* was ever entertained by either of two other men! The amount of which is we must beware not only of borrowing from our esteemed and *exigeant* contemporary even the most trivial paragraph of news without acknowledgment, but also of publishing a single thought that is above his comprehension.

DR. A. J. C. SKENE is quoted as saying that some easy way of sterilizing the hands and keeping them in good condition has yet to be discovered. "All present methods leave the hands so rough that if they are clean they do not appear so, and are very uncomfortable to one who operates several times daily. Such a one can be recognized on the street by the shrivelled state of his hands. According to a writer in the *Hom. Recorder*, there is a ready method of relieving and preventing the trouble, viz., by the use of warm water, castile soap and calendula ointment —whether after applying the ordinary disinfectants or in place of them he does not say. A Philadelphia physician told the scribe he had found this combination to work wonders, and showed his hands in proof of it.

BIBLIOGRAPHICAL.

A TREATISE ON THE NERVOUS DISEASES OF CHILDREN, FOR PHYSICIANS AND STUDENTS. By B. Sachs, M. D., Professor of Mental and Nervous Diseases, New York Polyclinic, etc. New York: Wm. Wood & Co.

Text-books upon the numerous diseases of the adult are numerous and some of them very excellent. These works include, to a certain extent, the nervous affections of childhood, but they lack those minute details of diagnosis and treatment so essential to the proper understanding of a large list of diseases in infancy and early childhood. Dr. Sachs opens his work with a discussion of functional diseases, under which head is included all those diseases which either occur frequently during early life, or which, when occurring at this period, have some distinctive features. Following functional diseases are that large class of nervous troubles included under organic diseases of the peripheral nerves, of the spinal cord and of the brain, proceeding from the simple to the more complex. The pathology and the diagnosis of each disease has been given with marked clearness, and the treatment is the experience to a great extent of the author, gained from a large clinical and private practice, and from an extensive reading of neurological literature. The training of the teacher is shown in the arrangement of the work and the clearness with which each subject is handled.

POINTS ABOUT TRAINED NURSES.

No person has greater power for evil or for good than has the nurse in the sick-room. Her actual authority is second to that of the physician, but her opportunities for exercising it are almost unlimited. If a physician in a country town wishes to secure a trained nurse he should telegraph or write to the Nurses' Directory, to some hospital or physician whom he knows, in the nearest adjacent city, stating for what sort of a case he will require a nurse, what he will pay and when he will require her. Such a message should secure for him almost immediately whatever service he requires. The traits of character which make the ideal nurse are patience, obedience, tact and good sense and temper. The nurse's costume should consist of a cambric or seersucker gown, with white cap, cuffs and apron. Woolen gowns should never be permitted in a sick room. Her authority is absolute after the physician's. She must obey his instructions to the letter, even if they are against her judgment; she has no discretion in the matter. But the patient and the patient's family must obey her. She must never be allowed to disobey the physician's orders, and the first symptom of any such behavior should be reported immediately to the physician. All his instructions with reference to treatment, diet and care should be followed faithfully. The fact that her patient is a man should make no difference in her behavior in the sick room. He is a patient, not a man, and she a nurse, not a woman. Whenever a nurse disobeys a physician's orders, or behaves in any manner which renders her dismissal advisable, the family or the patient should request the doctor to discharge her at once, and to supply her substitute. A word from him is sufficient to insure her departure.

Experience is a torch lighted in the ashes of our delusions.

SOCIETY REPORTS.

THE SOCIETY FOR MEDICAL PROGRESS OF THE WEST SIDE GERMAN DISPENSARY.

The regular monthly meeting of the Society for Medical Progress of the West Side German Dispensary took place at the Dispensary's building, No. 328 West Forty-second street, on Saturday, May 11, 1895, Dr. Augustin H. Goelet, President, in the chair.

Dr. T. E Oertel read the paper of the evening, of which the following is an abstract:

"OBSERVATIONS OF THE EFFECTS OF CANNABIS INDICA IN LARGE DOSES."

The dose of the solid extract of cannabis indica is given in the text books as from 1-6 to 2 grains. The writer took as an experimental dose 5 grains of Squibbs' solid extract, which produced a slight effect after the lapse of two hours.

Some days later 15 grains of the same preparation were taken, which acted in about two hours, the first hallucination being that he was transformed into a large cat. This passed away within a few moments. Others followed, of various character.

The sense of time was perverted and moments seemed years. Distance could not be measured with the accustomed degree of accuracy. Intense thirst was produced, but on taking a swallow of water the subject was possessed of the idea that a Niagara was rushing down his throat and that if he did not desist he would drown. He also thought that his heart had stopped beating, but on counting his pulse, watch in hand, found the pulse rate normal, though the time consumed by the second hand in making the revolution of the minute appeared to be interminable. Many of the hallucinations were very pleasant and beautiful, and at the present time seem to have actually transpired.

In experiments upon others it was found that any train of thought could be induced by suggestion, and that the subject was in a state akin to hypnotism. In one case the subject could be brought back to the normal state and again put into the receptive state at will.

Dr. S. H. Dessau said he had an experience with the drug while treating a young man with gonorrhœa. He had prescribed of *cannabis sativa*, the Homœopathic preparation, gtt. vij. t. i. d. After the first dose the patient felt dazed and his thoughts were confused. In the evening, after the second dose, he came to the office complaining that he felt compelled to take long inspirations, sighing deeply, inco-ordination of thought, a hysterical fit of laughing at nothing, a pain in the testicle, and said he felt like an old man; pulse was normal; he went to bed and the next day felt well. The doctor subsequently learned that cannabis indica had been substituted for cannabis sativa. His gonorrhœa was somewhat improved.

Dr. Kalish related a case where gr. ss. of the solid extract produced a profound dreamless sleep of fourteen hours. In the same patient gr. ¼ produced a ten hours' sleep. No other untoward symptoms.

Dr. Oertel, in closing, said that the effects of this drug varied according to the health, disposition and constitution of the patients. In one case gtt. xv. of the fluid extract produced the most alarming symptoms, while in another case there were no signs of any action of the drug for about five hours, when the most unseemly sensations were developed.

FRENCH MEDICAL SOCIETIES.

BIOLOGICAL SOCIETY.

Serotherapy in Cancer.—M. Fabre Domergue continued his general conclusions upon the above which had been criticised by M. Ch. Richet. The injections introduced in the neighborhood of the tumors, were near enough to the neoplasm to be affected by the diffusion of the serum. Without denying the phenomena stated by M. Richet, he interpreted them differently, and attached no special curative importance to them.

M. Eschner De Coninck read a paper upon the elimination of magnesia by the urine. This elimination assumes considerable proportion in the subjects of rachitis, in whom it may attain 10 to 15 m.m. per litre.

M. Richet has investigated the toxic power of intravenous injections made with the juice of epithelial tumors. The nature of the tumor, whether it be sarcoma or carcinoma, seems to have no influence upon its toxicity. But on the contrary, a very important fact occurs respecting the ulcerated condition of the tumor. Non-ulcerated neoplasms produce only benign effects, while those that are ulcerated are extremely toxic in the dog and rabbit.

M. Pachon succeeded in making a total resection of the stomach in the cat. One of the animals experimented upon survived six months, and finally died of inanition. The sensation of hunger, in effect, appeared to be abolished in it, and it refused food. The seat of the appetite seems then to reside in the stomach.

M. Gilbert communicated the results of his observations in seven cases of hypertrophic cirrhosis in children, and in them there were peculiar conditions not found in the adult. At first there was considerable enlargement of the spleen, which measured thirty centimetres in its largest diameter. There were also deformities of the bones, tumefaction of the phalanges, general arrest of growth, all accompanied by pains in the bones and articulations.

M. Souliè reported a case of double urethra in a human fœtus of three months.

MEDICAL SOCIETY OF THE HOSPITALS.

M. Rendu: As respects traumatic neurosis, in which there is the diagnosis of hysteria such as was presented by M. Debove, it is not always wise to reject the possibility of organic complication, as the following case will show. A man, in consequence of a fall upon the head, was affected with hemiplegia of the right side, without any loss of consciousness, and no impairment of the senses or memory. A diagnosis of traumatic neurosis was at first made. On the seventh day there was a slight lapse of intelligence and of the memory, and on the ninth day a marked attack of Jacksonian epilepsy. Trepanning revealed a contusion of the brain, with localized encephalites. In place of this alteration, there might be small punctiform hemorrhages or a slight attrition, in which case the error in diagnosis would be more excusable. M. Siredey recently met with a case at Saint Antoine in which there was a wound of the head with no succeeding paralysis, but in which an autopsy revealed profound cerebral lesions.

Therapeutic Action of Salophene.—M. Marie has had the opportunity in a number of cases, to study the therapeutic action of salophene. As a result, he considers it a remarkable substitute for the salicylate of soda, has all its curative properties in acute and subacute rheumatism, and seems to possess the same in gout, without any of the inconveniences of the latter remedy. In all the cases, and in those who could not bear the salicylate of soda, the salophene was followed by no disagreeable effects, and the digestive functions were rapidly re-established. Salophene has no effect upon chronic rheumatism. This remedy is a compound of salicylic acid and acetyl paraamido phenol, but the latter substance seems to play only a subordinate part, so active is the acid, which contains the proportion of 51 in 100. The moderate dose is 3 or 4 grammes. That of 5 or 6 should only be given exceptionally, and it has not been proven that it is more active than the dose of 4 grammes. It may be given in powders or in solution of pure water.

M. Rendu: I know of the above remedy only from the report of one patient who received benefit from it.

Use of Cold Bathing in Pneumonia.—M. Comty said: From observations made upon this subject, I conclude that cold bathing, although affording relief to many children, strengthening them, and putting them in a better condition to resist, is not a specific remedy capable of overcoming pneumonia or of shortening its thermic periods. The cold bath acts in pneumonia as it does in typhoid fever and infectious diseases generally; they reduce the heat of the body and cool the patient, but do not prevent its production nor influence its thermic

source. These cold baths are applicable to children of every age, are very useful in pneumonia, act in a remarkable manner upon the heat of the body, upon the respiration and pulse, which they reduce, upon the nervous system, to which they give tone and vigor, and upon urinary depuration, which they accelerate. They save patients in many instances, and relieve them always. But the comparative study of the thermic periods in children treated by cold bathing and those treated otherwise only permits the conclusion that cold balneotherapy does not affect the thermic cycle of pneumonia, nor does it advance by a day or an hour the moment of the cessation of the fever.

SURGICAL SOCIETY.

President, M. Anger.

Total Abdominal Hysterectomy and Uterine Fibromata.—M. Ricard does not believe that the method pursued by M. Richelot is the very best that can be adopted. There is a tendency at present in cases of enormous fibromata—the small and medium sized sub-umbilical being justifiable only by vaginal hysterectomy—to prefer total abdominal hysterectomy, highly approved both in America and the provinces of France by Doyen, Delageniere, etc., and but a limited confidence given to the method by the pedicle, external or reduced. The vagino-abdominal method seems also to have been abandoned by the majority, and with reason, for it is a process by which the peritoneum is too easily contaminated. M. Ricard practiced total abdominal hysterectomy in ten cases with only one death, which was explained by an incident impossible to foresee—infection by the dropping of septic uterine mucosities into the peritoneal cavity. The mortality already seen is explained by infection. The process utilized by M. Ricard is very simple, and he treats a fibromatous uterus as he would an ordinary tumor. He has sutured the vagina, but will do so no more. In his experience the uterine artery is not very much to be feared. In fine, total abdominal hysterectomy appears to be less grave than abdominal hysterectomy with the external pedicle. M. Routier insists upon the tedious inconveniences of the last process, which occasions eventrations. He has made use of the method recommended by M. Ricard for more than two years. M. Tuffier has employed total abdominal hysterectomy five times, and is well satisfied with the operation as executed by M. Ricard. He does not find it so easy to tie the uterine artery as is said; he never sutures the vagina, as it affords free escape for the fluids. In five cases he has had but one death, and that was from hemorrhage of the uterine artery. M. Quenu has operated but twice by total abdominal hysterectomy, and thinks it the "modus faciendi" of the future. The external pedicle exposes not only to tedious inconveniences, but to both primary and secondary infections. One case of death by purulent infection in fibroma with suppurating lesions of the annexæ. Neither the castration nor especially the myotomy recommended by M. Routier should be forgotten in cases of pediculated fibromata. There should be no fear to keep this idea in mind and constantly to repeat it. It is not the fibroma itself but the patients attacked by it that must be regarded.

On the Use of Chloroform.—M. Reynier defended with warmth and full conviction the cause of chloroform. He discussed, point by point, the enthusiastic communications from Lyons, disputed the value of the published statistics, and added that there was a large number of deaths by ether. Passing to the physiological question, he insisted upon the theoretical advantages of chloroform, and was the only speaker who fearlessly defended the cause of chloroform. M. Maurauge described a new form of anæsthesia by a mixture of chloroform, sparteine and morphine.

FRENCH SOCIETY OF OPTHALMOLOGY.

Ocular Massage.—M. Parenteau, of Paris: Massage of the eye is a therapy that merits pursuing. When employed with remedies, it is very useful in kerato-conjunctivitis, corneal leucoma, iritis, etc. The ordinary massage is applicable to muscular derangements. Confirmed myopia of the opacity of the lens is a contra-indication.

Treatment of Conjunctivitis by Prolonged and Palpetral Irrigation.—According to M. Vacher, of Orleans, these irrigations remove the purulent secretions. In order to apply the fluid abundantly, very weak solutions should be used. In cases of iritis I employ decoctions of the leaves of belladonna, and the irrigations act more favorably than ordinary lotions.

Cauterization in Softening of the Cornea.—M. Sureau, of Paris: It often happens, after grave purulent ophthalmiæ of infants, that an infiltration and a necrosis of the cornea are produced, despite the best treatment. In these cases, we obtain by means of cauterization a clearing up of the cornea after a few days. I propose to complete the treatment by massage of the eye with iodoform and the yellow oxide.

Oculo-Pupillar Troubles in a Case of Unilateral Syringo-Myelia.—M. Vialet, of Paris: In the case of syringo-myelia which I present, the patient, aged fifty-seven, has been affected for twenty-eight years with muscular atrophy of the left upper extremity, with a syringo-myelic interruption of sensibility. The ocular symptoms are as follows: The palpetral opening is notably less on the left than the right. The ocular globe appears smaller; in reality it has the same dimensions as that of the opposite side, but it is deeper in the orbit. The left pupil presents a very marked myosis. It reacts to light and to convergence. The right pupil has preserved the reaction to convergence, but not to light. This patient realizes the three oculo-pupillar phenomena obtained by Claud Bernard that followed section of the cervical sympathetic, viz.: diminution of the opening of the lids, retraction of the globe of the eye and myosis. These phenomena are produced, on the one hand, by paralysis of the muscles of Müller in the lid and orbital aponeurosis, and, on the other, by paralysis of the dilating fillets of the pupil, produced by a medullary lesion glioma, which has invaded the cilio-spinal center nearly unilaterally—of the left side.

A Rare Complication After Extraction of a Cataract.—M. Oger de Sperille, of Paris: Following an operation for cataract, I observed a broadening of the anterior chamber, which continued some time, and only yielded to iridectomy.

Grave Ocular Complications of Syphilis and Their Treatment.—M. Abadie: I call those grave manifestations of syphilis which affect the choroid, the retina and the optic nerve, which develop rapidly and which when left alone or carelessly treated soon cause irreparable loss of vision. These ocular complications are habitually slow. They appear ten, fifteen or twenty years after the beginning of the disease, in patients who have had trifling inconveniences or none at all, and who have not pursued prolonged mercurial treatment. It is only exceptionally that, at the time of the secondary accidents, the deep membranes and the optic nerve become affected. Against these lesions, the prognosis of which becomes serious if time is given them to disorganize the sensitive elements of the retina, the treatment intended to combat them becomes most important. Mercurials administered internally, pills of the protiodide, the syrup of Gibert and the iodide of potash are absolutely insufficient. It becomes necessary to have recourse to subcutaneous injections of the cyanuret or the bichloride of mercury, and in the most serious cases, intravenous injections of the same solutions. M. Abadie presented patients whose vision was defective in spite of the employment of the established methods, and had only been retained and restored by the subcutaneous or intravenous injections of the mercurial salts. He made some intravenous injections during the sitting and in view of the members of the Society.

M. Galezowski: These injections are not harmless, but subject to accidents. The progressive evolution of syphilitic choroiditis proves that the treatment should not be interrupted, but should be continued during two consecutive years.

M. Chibert: The prolonged use of mercury produces poisonous effects, and its administration should be carefully watched.

M. De Wacker: The prolongation of the treatment of ocular syphilis is not special of itself, but must act as for syphilis generally.

Pathological Anatomy of Acute Hyperplastic Pneumonia.—I. Brett: This work is devoted to the study of a curious

form of acute pneumonia, for a long time confounded with chronic pneumonia, and for that reason it presents matter of great interest, as it shows the morbid process put in operation by the action of microbes or their toxines acting simultaneously upon the pulmonary epithelium and upon the connective vascular substance of the organ. From these operations we observe the production of the ordinary pneumonic alveolitis concurrently with the existence of sclerous masses of recent formation. This fibroid evolution seems to extend from the alveoli to the sub-pleural tissue, and determines very rapidly pleural adhesions, whose pathological importance is great, for they fix the lung, retard the regression of the products of the alveolitis, and cause the pneumonia to become more or less chronic.

ACADEMY OF MEDICINE.

President, M. Empis.

Diphtheritic Angina in a Herpetic Form.—M. Dieulafoy showed that the study of herpetic angina needs to be reviewed. He reported four observations of herpetic angina, a type recognized as diphtheritic by bacteriological examination. Two of them were followed by paralysis. There were also pseudo-membranous herpetic anginæ that were not diphtheritic. Trousseau has also called attention to the association of herpes with diphtheria. It is interesting to recall this fact, for often the presence of herpetic vesicles in the throat or at the naso-labial orifice, gives the idea that the affection is more benign than it really is.

Treatment of Diabetes by Alternating Medication.—According to M. Robin there are three fundamental indications in diabetes. 1st. To relieve or delay by all means the general changes, especially those of the nervous system. 2d. To avoid everything that is capable of producing the changes. 3d. By an appropriate regimen to deprive the organism of all materials by which it can most easily produce sugar, and which will have the advantage of keeping from the hepatic cell its functional excitant. As respects the regimen, M. Robin adopts that of M. Bouchardat. But he insists upon demineralization. This is intense in diabetes, and is one of the great causes of tuberculosis. The chloride of sodium, salts of potash in the form of green vegetables, cabbage, chicory or the salt of dandelion, glycero-phosphate of lime and magnesia will be present in turn. To diminish the changes, M. Robin employs three groups of remedies. 1st. Antipyrine is given in doses of two grains daily for only five days—contra-indicated in those who are albuminuric or anorexic. 2d. To the antipyrine succeed codeine, alkalines and the earthy alkalines—sulphate of quinine for fifteen days. 3d. After the second group, opium in small doses, and not continued long. Valerian is useful, especially in cases of polyuria, and azotine, belladonna, and bromine, the depressing action of which makes it necessary to employ it with caution. In a typical diabetic, the summing up of the method of alternating medication is as follows: The regimen of Bouchardat for eight days, then antipyrine for five days. Should the sugar entirely disappear, simple regimen. If it does not, then employ the remedies of the second group for fifteen days, of the third for ten days. Regimen alone for one month. Renew the entire series, if the sugar continues. By this treatment, of 100 diabetics who passed 100 grains of sugar in twenty-four hours, M. Robin obtained twenty-five certain cures, twenty-five probable cures, thirty-two ameliorations considerable and permanent, and only eighteen unsuccessful cases.

Transmission of Vaccinal Immunity from Mother to Child.—M. Hervieux reported an observation of M. Audet, showing a fact of the transmission of vaccinal immunity. The mother was vaccinated successfully during the fifth month of pregnancy. The child was vaccinated unsuccessfully. But, a singular fact, a second child, born four years later, was three times re-vaccinated without success. M. Hervieux discussed hereditary influence, and showed that it resulted perhaps from individual resistance.

The Nutrition of the Animal Cell.—M. Gaube suggested the mineral theory of evolution and the nutrition of the animal cell.

MEDICAL SOCIETY OF THE HOSPITALS.

Paroxysmal Hemoglobinuria.—MM. Siredey and Garnier reported the case of a woman who, in 1891, had an attack of the above disease, and again in April, 1895. The attacks began by a feeling of general distress, with a heavy chill, painful constriction of the epigastrium, nausea and vomiting. The urine became very red, and showed by the spectroscope streaks of hemoglobine. During the attack the serum is quite red and easily dissolved, and during the interval is highly colored around the clot. In each instance the spectroscope revealed the hemoglobic streaks. M. Hayem, in his investigations of hemoglobin, has shown that the presence of hemoglobin in the urine indicates not only a solution of the hemoglobin, but a transformation of it. It is probable that this transformation is produced by a poisoning of the blood, by means of some agent as yet unknown.

Vapor Chambers in Croup.—M. Variot: Thanks to their employment, we are able to prevent many of the complications of croup. As soon as the child shows croupy symptoms it is placed in a chamber, the atmosphere of which is supersaturated with the vapor of water, after receiving an injection of serum. The vapor facilitates the dissolution of the false membranes and acts as a sedative upon the spasmodic symptoms, which cease in a few hours. This treatment is easily employed, as all that is necessary is to evaporate the water by a deep, wide basin put over an alcohol lamp or a gas burner, and it seems to be a powerful adjuvant of serotherapy.

FRENCH OPHTHALMOLOGICAL SOCIETY.

Mercurial Exanthema. Hemorrhages, Cutaneous and Ocular.—M. Guibert reported two observations in which relatively small doses of mercury produced cutaneous hemorrhages similar to those of purpura hemorrhagica. These were accompanied in each case by ocular hemorrhages. The mercury was injected in the form of biniodureted oil—panas. M. Guibert imputed the hemorrhages, not to the process employed—he knew of none better or more prompt—but to an idiosyncrasy of the subjects, which should induce caution against the abuse of mercurial treatment.

The Permanganate of Potash in Ocular Troubles.—M. Vian, of Toulon, makes use of the above remedy in the treatment of micro-organic affections of the eye and its annexæ, and employs a concentrated solution. He cited two cases of cure of purulent ophthalmia by the daily application of a solution of the permanganate—1-10—and bathing with the 1-2000 of the same. In the treatment of abscess and purulent catarrh of the lachrymal passages, he employs the daily injections of the remedy in solution, and has effected rapid cures. He also tried a solution of two per cent. in infectious keratitis without hypopion, with no result.

Associated Paralysis of the Horizontal Movements of the Eyes.—M. Saurineau, of Paris, said: Among the paralyses of motion, the horizontal, vertical, convergent and divergent movements, those of the horizontal and lateral are the most interesting to study, and their explanation removes a difficulty which for a long time has puzzled physiologists, viz., that of the association, for the same movement, of two muscles, the rectus internus of one side and the externus of the other, both animated by different nerves. A variety of these paralyses, unobserved as yet, is the one now in question. Two types of paralysis of the lateral horizontal movements have been described, the first by Foville—1858—and particularly by Fereol and Groux. These authors have shown that a lesion of the "eminentia teres," that is to say, the round eminence or protuberance of origin of the sixth pair, determines a paralysis of the rectus externus of the corresponding side, and of the rectus internus of the opposite side. The interpretation of this fact has been given by MM. Duval and Laborde, who have shown that the nucleus of the sixth pair sends an anastomotic branch to the rectus internus of the opposite side, which is designed to associate this muscle with the externus for the production of the same lateral movement, while for the movement of convergence the same rectus internus receives a special nerve force coming from the nucleus of the third pair.

The second type has been described by M. Parinaud. It consists of a paralysis of the rectus externus of one eye, while the rectus internus of the other is not only not paralyzed, but, on the contrary, is in state of spasm, more or less pronounced. In this case, the lesion is located below the nucleus of the sixth pair, along the course of the external ocular-motor nerve. I have observed a third type, distinctly characteristic, which is exactly the inverse of the preceding. It is that in which the rectus internus of an eye is paralyzed in the lateral movement only (the movement of convergence remaining intact), while the rectus externus of the other eye is subject to spasmodic movements. The lesion seems to be located in the protuberance, in the course of the anastomotic filament running from the nucleus of the sixth pair to the rectus internus of the opposite side.

The Ocular Complications of Diabetes. M. Koenig, of Paris: Diabetes causes very numerous troubles in the visual apparatus. Those most frequent are weakness of accommodation, sometimes paralysis, opacity of the lens. In 500 hundred patients examined at Vichy, I have observed ocular lesions 56 times—11 per cent. Of this number there were 10 cases of cataract. Among the other principal lesions there occurred 20 difficulties of accommodation, 2 of gangrene of the lids, 2 of hemorrhagic glaucoma followed by death, 2 polio encephalitis chronic, in which death ensued at the end of two months. The diabetic cataract is most frequently of a milky appearance, but in aged persons it resembles the ordinary senile cataract. Among the accidents following the operation I have often observed œdema of the lids and peri-orbital neuralgia. Generally, there is no risk in the operation, and cicatrization of the wound is as rapid as in ordinary cases. Glycosuric retinitis is characterized by the presence of small effusions and white exudations. The predominence of the latter and their grouping together in the region of the macula, indicates the presence of albumen in the urine. The difference between the two forms of retinitis is then impossible, and this statement has great importance in view of the prognosis. If the optic nerve is involved, there is a discoloration, or a simple white atrophy without œdema. Two of the patients affected with optic atrophy presented interesting peculiarities. The first had a brother who was blind in consequence of atrophy. The second, aged six years, voided 57 grains, 72 centigrammes per litre of sugar. In the cases observed, grave ocular complications always preceded the causes that determined death.

Whatever they may be, the ocular signs have often served to indicate the disease By their appearance in the early stages of diabetes, they suggest the treatment that will prove successful.

Menstruation in a Child of Six Years.—G. E. Rein presented to the Society of Gynæcology and Obstetrics of Kiew, a child of six years who has menstruated normally for a year. The menses returned every three or four weeks, and lasted each time from four to ten days. The breasts, external organs of generation, and hair upon the pubis, resembled those of a girl of thirteen or fourteen years. The abdomen was considerably swollen in circumference, being about thirty-five centimeters. Examination revealed the presence of a cyst of the ovary, that had thick walls and fluctuated.

Treatment of An Attack of Infantile Eclampsia by Massage.—It is well known that primitive eclampsia of children is promoted by many different causes—most generally by reflex from irritation of the intestinal canal, teeth, pricking of a pin, etc. The child, from being well, is suddenly seized with abdominal pains, loses consciousness, and soon an attack of eclampsia supervenes. On questioning the parents we learn in the majority of cases that the child has taken too much food, and the digestion has been imperfect and unnatural, the fæces containing fruit, foreign substances, etc. Hence, in all cases, the object of treatment has been to remove all such irritating matter from the canal, and calomel is generally administered for this purpose. But as this cannot be always taken because of the inability to swallow it, recourse is often had to injections of substances that excite the peristaltic movements of the intestines. For this purpose, Dr. Schumann advises the employment of massage, with which he always produces excellent results. It promotes peristaltic movements, expels the gas and fæcal matter, and cuts short the eclampsic attack. Massage is contra-indicated when there are signs of peritonitis. If the attack be violent, combine the use of narcotics with the massage. Dr. A. F. Plicque also recommends massage in biliary lithiasis, because the existence of obesity, diabetes, gravel, gout, dyspepsia, constipation, entenoptosis, may modify more or less the ordinary regimen of the subject of lithiasis. Sometimes, and especially after surgical operations and cholecystentenostomy, particular heed must be given to the infection that is facilitated by the close association of the gall bladder with the intestine. In non-complicated cases, Dr. Plicque considers general massage an excellent passive exercise. Local massage in the region of the gall bladder often gives very good results. It should only be practiced during the intervals of complete rest and quiet, and only by a physician.

Treatment of Acne of the Face by Massage.—Dr. Pospèlow, Professor of Dermatology and Syphiligraphy in the Faculty of Medicine at Moscow, has recourse successfully to massage of the skin of the face, which the patient may himself practise twice a day, observing the following rules. Before going to bed, the patient warms the hands by plunging them into water heated to 45°. After drying them well and greasing them, he rubs and presses gently the sebaceous cysts so as to expel their contents. The frictions upon the forehead should be made towards the temples, on the upper part of the cheek, from the internal angle of the eye towards the external, lower down from the ear towards the nose, from the nasolabial furrow towards the commissure of the lips, and from the angle of the jaw towards the chin. After the massage, which should last from fifteen to twenty minutes, the face must not be bathed, but simply powdered with rice powder. The next morning, wash in warm water, wipe softly with fine linen, and one hour after, repeat massage of the skin of the face, for five minutes only and less vigorously than the previous evening, after which, cover the face again with rice powder or starch. The massage should be repeated every day, morning and evening, and continued for several months. Acne of the face is so obstinate an affection and so tenacious that the undeniable inconveniences of this mode of treatment will be largely compensated by the good effects which M. Pospèlow has obtained in the majority of cases. J. A. C.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York.

Chewing As a Remedy For Acid Dyspepsia.—Acid dyspepsia is a condition in which there is present an excessive amount of acids in the stomach. According to Dr. J. Bergmann (*Berl. Klin. Wochnschr.*, 1895, xxii, p. 126; *Med. Surg. Bul.*), the increased amount of acids can generally be referred to the blood. Thus, it is a well-known fact that acid dyspepsia is an almost constant companion of the diseases of the acid diathesis, such as gout, chronic rheumatism, diabetes, etc. The system relieves the blood of the injurious acids, and leads it to that organ in which it is most apt to prove of use to the animal economy, viz., to the stomach, where it can act as a digestive agent. But when the alkalinity of the blood is reduced, the saliva also turns acid, whereby it can no longer fulfill its normal function of neutralizing any excess of acid in the stomach. Bicarbonate of soda and magnesia have been administered as substitutes for the saliva in such cases, but very often failed to do any good, on account of the excessive quantity of these drugs which are necessary in order to neutralize a gastric juice containing three per cent. hydrochloric acid. The author, therefore, was led to look to the saliva rather than to the gastric juice as the proper place to apply treatment. The saliva must regain a sufficiently alkaline reaction. To this end, the activity of the salivary

glands must be stimulated, and we find that the most powerful physiological stimulus to these glands is the act of mastication. Indeed, it has been clearly shown that the saliva, during mastication, has an alkaline reaction in every instance.

And this corresponds exactly with the experience that the symptoms due to hyper-acidity disappear while the patient is eating, but reappear some time after the meal during the period of digestion. During the meal the act of mastication calls forth a copious flow of alkaline saliva, which neutralizes the surplus acid in the stomach, and thereby prevents the appearance of any symptom. In the period of digestion, however, during which time there is no mastication, the secretion of saliva is arrested, and consequently the surplus acid is not neutralized, and therefore causes the troublesome symptoms. And yet this beneficial regulating quality of saliva is needed most during this particular period.

These considerations have led the author to have such patients chew continuously during the period of digestion, and he has had remarkable results in every instance. After having tried several substances as masticatories, he finally had tablets made up of some substance suitable for chewing, and used as adjuvants ginger and calamus roots and magnesia.

The excellent results the author has had from this line of treatment have convinced him that his explanations, as given above, are correct, and he believes that the simplicity and efficacy of such a treatment should recommend its use to physicians in general.

Hot Springs (Ark.) Indications.—Dr. A. H. Woodhull, of the Hot Springs, Ark., U. S. Government Hospital, states (*Med. Rec.*) that relief may reasonably be expected at the Hot Springs in the following conditions: In the various forms of gout and rheumatism, after the acute or inflammatory stage; neuralgia, especially when depending upon gout, rheumatism, metallic or malarial poisoning; paralysis not of organic origin; the early stages of locomotor ataxia; the early stages, only, of Bright's disease; disease of the urinary organs; functional liver disease; gastric dyspepsia not of organic origin; chronic diarrhœa; catarrhal affections of the digestive and respiratory tracts; chronic skin diseases, especially the squamous varieties, and chronic conditions due to malarial infection. The Hot Springs water is contra-indicated in all acute inflammatory diseases, tuberculosis, organic disease of the heart or brain, cancer and other malignant disease, aneurism and all cases where stimulation of the circulation is to be avoided.

Chloroform Internally for Dyspepsia.—V. G. Stadnitzky, in the *British Medical Journal*, has carried out a series of elaborate experiments on seven healthy young men in order to study the influence of chloroform, when administered internally, on the gastric functions. In each instance the experiment lasted fourteen days, being divided into two equally long stages, during the second of which the subject was given from three to ten drops of the drug, with water, three times daily. The author's general conclusion is to the effect that $CHCl_3$ markedly improves all the functions of the stomach, which fact suggests that the drug might prove very valuable in the treatment of various gastric disturbances, and, before all, in dyspepsia.

Chloroform in Lead Colic.—Dr. F. MacFarlane, of New York City (*American Therapeutist*), remarks that he has had great success in the treatment of lead colic by the internal administration of chloroform. He gives ten drops every half hour if required. The pain is readily relieved by the drug. The other features of the treatment go on in the usual way. The chloroform is decidedly more effective in relieving the pain than morphia, as a trial of the two remedies will abundantly prove. The speedier relief also favors a quicker and more satisfactory recovery.

Electric Effluvation for Chronic Leg Ulcers.—Dr. Merquant (*Med. Week.*) has obtained excellent results from static electricity in the treatment of chronic leg ulcers, especially those of a varicose character. The method employed, which was originated by Professor Doumer, of Lille, is as follows: The sore is first washed with an antiseptic solution (perchloride of mercury or carbolic acid in feeble proportions), and then covered with a thin layer of absorbent cotton. The patient is placed on an insulating seat and connected with the negative pole of an electro-static machine. The electrode is then approached to the sore, keeping it, of course, sufficiently far away so that no sparks are discharged, though near enough for the production of the electric souffle or wind. The effluvation is continued for ten minutes, after which the wound is dressed. The sittings are usually repeated three times a week.

The dressing used for the patients treated by Professor Doumar and Dr. Merquant consisted at first in sprinkling the sore with powdered subcarbonate of iron, and covering it with aseptic cotton; but later on the carbonate of iron was suppressed, and a simple application of absorbent cotton-wool resorted to. As this dressing is only renewed twice a week, the effluvation is practiced once in every three times through the layer of cotton, which, therefore, should be as thin as possible.

Mechano-Therapy in Chronic Diseases of the Heart.—In the *Practioner*, Eccles writes an article on this subject (*Med. and Surg. Rep.*) He believes the rationale of the treatment of certain chronic diseases of the heart, by a combination of rest, massage, assisted and resisted exercise, followed by outdoor walking carefully graduated, is based upon:

1. The rest afforded to the overstrained or enfeebled heart by the adoption of the recumbent position for a time.

2. The aid given to the circulation by the mechanical centripetal pressure exercised on the limbs and trunk by massage.

3. The more rapid oxygenation induced by the acceleration of the circulation, and the diminution of peripheral resistance by the same means.

4. The improvement in general nutrition, the elimination of waste products, and the increased metabolism induced by the passive and active exercises in and out of doors.

5. The careful preparation and selection of suitable food, coupled with the aid to digestion afforded by abdominal massage and exercises acting directly on the walls of the abdomen, and exercising pressure on its contents.

6. The substitution of regular, graduated, assisted, and resisted movements for the spasmodic and ill-regulated exercise taken by patients suffering from cardiac functional disturbance, with or without organic lesion.

Galactotherapy.—A correspondent of the *Boston Medical and Surgical Journal* states that Dr. W. B. Sampson writes from the Transvaal, South Africa, to call attention to the advantages, in zymotic diseases, of a wet pack; not however, of water, but of warm milk. An epidemic of typhoid fever, due to the use of milk which had stood in buckets previously washed in water, subsequently ascerrained to be infected, suggested the idea that, if milk would so easily absorb germs from wood, it might do the same from the human body. Experiments in cases of erysipelas seemed to confirm the truth of this theory, and, accordingly, in an epidemic of smallpox, galactopathy was substituted for hydropathy to reduce fever, prevent pitting, and soothe the nervous system; perhaps, also, in some degree, to nourish the patient. Three blankets were laid upon a mattress, and covered by a single sheet saturated with one and a half pints of fresh, warm milk (not boiled). The patient was laid upon the sheet. This was then wound tightly around him, the ends brought over his shoulders, and his arms left bare. The blankets were then, one by one, packed over him, and he rested thus for an hour. This was done once in four hours. After the pack, a warm bath or sponging.

Dr. Sampson reports that in eighteen cases so treated by him, in the smallpox lazaretto at Kimberley, before the eruption appeared, the disease was *aborted*, and the patient convalescent in five days. In one case, where the eruption had just manifested itself, the milk-pack was used twice as often. The eruption disappeared entirely within twenty-four hours, and in four days the patient was able to leave his bed.

Subsequent experiments in cases of the various infective

fevers gave good results. The milk-pack was found to lower temperature, stop delirium, procure comfort for the patient and promote sleep. It is, in its action, gentle, soothing and wonderfully recuperative. It causes no weakening, but increases the patient's flesh and strength. Tried side by side with hydropathic wet-sheet packing, the superiority of the milk-pack was manifest.

In scarlet fever, measles, typhus, typhoid and even malarial and puerperal fevers, remarkable results were obtained. One case of scarlet fever yielded in three days. Milk compresses to the throat in diphtheria gave the best results If this remedy should really prove as efficacious as it is simple, therapeutics has made an advance.

Abortive Treatment of Typhoid Fever.—At a meeting of the St. Louis Medical Society, reported in the *Medical Review* for Dec. 29, 1894, Dr. J. C. Woodbridge explained his method of treating typhoid fever. It is based on the supposition that the patient, in the earlier stages at least, is merely a receptacle containing the specific poison. If this can be destroyed and eliminated, no further measures will be required. The temperature need not be reduced with antipyretics, he may take exercise from the beginning to the end of the attack, and may eat beefsteak and roast beef. No intestinal hemorrhage occurs if the patient is seen as early as the eighth or ninth day. Although the speaker did not expect to succeed in antisepticizing the whole body, and in aborting every case of typhoid fever, he had succeeded in reducing the mortality to nothing, and that, too, in a community where he had formerly had a death rate of 17 per cent., and where other physicians, with the old treatment, continued to meet with no better success up to the present day. He had not had a death in thirteen years, and had reduced the average period of sickness from several weeks to ten or twelve days.

It has been claimed that the cases were not true typhoid fever. If that is so, what has become of the typhoid fever patients? The death rate among the cases of his fellow practitioners remains unaltered, and their symptoms are the same as those of the speaker's patients.

The treatment consists in the administration every two hours for the first two or three days, of the following:

Podophyllin	$\frac{1}{100}$ gr.
Guaiacol carbonate	$\frac{1}{10}$ gr.
Calomel	$\frac{1}{10}$ gr.
Thymol	$\frac{1}{10}$ gr.

Later there is added:

Guaiacol carbonate	$\frac{2}{10}$ gr.
Thymol	$\frac{1}{10}$ gr.

Given as liberally as possible without producing too free catharsis; that is six or eight movements daily. After a few days this is substituted by the following:

Guaiacol carbonate	4 grs.
Thymol	2 grs.
Menthol	½ gr.
Eucalyptol	5 grs.

which is continued to the end of the attack.

Jugulation of Pneumonia.—Petresco, of Bucharest, claims to have successfully jugulated pneumonia by enormous doses of digitalis. In 1891 he had treated 825 cases with a mortality of 2.06 per cent., and in 1893 he claimed to have treated successfully 1,061 cases during the previous twelve years (*Rev. de Med.*). He gives one to three drachms daily of digitalis leaf in infusion (1 to viifs), a tablespoonful being given every half hour.

Locomotor Ataxia.—*Medical Brief* says: To diminish the ataxia by strengthening antagonistic muscles and to help patients to walk, means to keep them out of bed. To strengthen them through proper food, sustain their moral tone, and inspire hope, are essential elements in giving the courage and energy necessary to good results in treatment. Systematized mechanical exercises for the arms and legs, by means of mechanical appliances, brings about wonderful improvement in the condition of the limbs. Leyden cites a case where a course of systematized mechanical movements resulted in such marked improvement that the patient could stand alone and walk. His moral tone underwent a complete change.

The Cold Bath in Asthenic Diseases.—Baruch (*Therap. Gaz*) urges the value of this measure, and thus describes its effect. A patient suffering from an infectious disease lies prostrate, with thready pulse, shallow breathing, dull eye, picking at the bedclothes, subsultus, involuntary defecation. All these remind us that here we have the very climax of asthenia. Seat such a patient in a shallow warm bath, and pour with some force one or two basins at 75° F. or less over his head and shoulders; rub him gently; repeat if indicated. The result will astonish those who have not tried it. There is a gasp for breath, the dull eye resumes its lustre, the facial cyanosis yields to a better hue, the pulse becomes slower and less compressible The wheels of life are again set in motion, not, as in the case of syncope, to remain so; but to again be overbalanced by the toxic blood which supplies the nerve centers. Again and again this affusion must be repeated. Fear not the so-called shock, for this is just what you want to evoke. It is, when judiciously administered, followed by reaction, and reaction is the great stimulus, greater than all medicinal agents or alcoholic stimulants.

Electric Light Bath.—At the last annual meeting of the American Electro-Therapeutic Association Dr. Kellogg read a paper describing an incandescent electric light or radiant heat bath. The author claims to be the first to construct a bath of this kind. It is made in the form of a cabinet with fifty or sixty incandescent lamps arranged in rows inside, the spaces between the lamps being covered with glass mirrors. Other forms have been constructed for local application. It has already been demonstrated by Siemens and others that the electric light promotes growth in plants, encourages development of chlorophyll, and the setting and ripening of fruits. To determine more exactly its physiological properties upon human beings and its therapeutic value, Dr. Kellogg has conducted a series of experiments, the results of which he thinks justify the following conclusions: (1) The incandescent electric light bath increases the production of carbon oxide, and hence stimulates tissue metabolism. The amount of increase in a bath of thirty minutes' duration was nearly 50 per cent. (2) The urea and total chlorides were somewhat diminished by the bath, owing to the greatly increased activity of the skin. (3) Vigorous perspiration was induced at a temperature below that of the body, 85° F., and in half the time required to induce perspiration in a Turkish bath at 106° F. The action of the electric light is entirely independent of the temperature of the surrounding air. (4) The incandescent electric light bath possesses many advantages over the Turkish, Russian, vapor and hot-air baths, the chief of which are: The penetrative power of radiant heat, which is far superior to the convective heat of the baths mentioned; the superior stimulating effect upon tissue metabolism; the readiness with which perspiration may be induced when desirable, one to three minutes; the low temperature of the surrounding air, which permits the full effects of the bath; the readiness and accuracy with which the dosage of the application may be regulated; the wide range of application, which admits of the use of the bath for a tonic and sedative, as well as alterative and spoliative effects. (5) The incandescent electric light is superior to the arc light for therapeutic purposes, for the reason that it may be more readily and evenly distributed, and is free from the injurious effects which have been shown to result from too close proximity to the arc light.

Compression of Abdomen in the Treatment of Seasickness.—Brunnon (*Therap. Rev.*) reports three cases of intractable naupathia which he treated by a methodical compression of the abdomen, as recommended by the illustrious Arago. One of the patients, a lady, had always suffered from the disease in its severest form, and during the entire voyage, from nine to eleven days. But this time she experienced only a slight nausea on the outbound trip, although the compression was imperfectly applied with a flannel band only seven meters in length. On the home voyage the compression was done carefully with cotton and a bandage fifteen meters long, and for the first time in fifteen years she felt no uneasiness and enjoyed every meal.

The author thinks that these results justify his attempt to prevent this old receipt from falling into oblivion.

RETROSPECTIVE DIETETICS.

Matzoon.—H. J. Patterson, (*Md. Agr. Exp. Station*) is a fermented drink that has been quite recently brought to the attention of the American trade. It is made from cow's milk by a special process of fermentation and is the drink of the Armenians and Turks which corresponds to the koumiss (fermented mare's milk) of the Tartars, and the kephir (fermented sheep's and goat's milk) of the inhabitants of Caucasus.

Matzoon has about the consistency of thick cream, is white in color and effervescent. It has a sharp, acid taste, with a flavor something like that of buttermilk and a slight odor of yeast.

Matzoon is prepared in Maryland and New Jersey by Iskiajan Brothers (Armenians), and placed upon the market in ordinary pint beer bottles, tightly corked. The labels on the bottles bear the inscription "Sultan's Matzoon," and in order to show the esteem with which this drink is regarded in the Orient, the quotation, "Oh, my darling Sultana, thou art as precious in the harem as thy delicious matzoon among drinks" is also added.

As a rule matzoon would not be found perfectly agreeable to the ordinary taste, at first; but as for most such things the taste is soon acquired, and many persons grow fond of it, and find it a refreshing, nourishing and healthful drink.

The composition of matzoon is as follows, the sample examined being about four or five weeks old.

Specific gravity	1.0254	
Sp. gr. after expelling CO_2	0 9940	
Water	87 79	per cent.
Alcohol	0.55	"
Carbon dioxide	0 27	"
Solids	11.39	"
	100.00	

COMPOSITION OF SOLIDS.

Albuminoids	3 29	per cent.
Fat	4.25	"
Lactic acid	3.01	"
Sugar	Trace.	
Ash	0 84	"
	11 39	"

For comparison the following table has been compiled, giving the composition of the different fermented milk products which have been referred to.

	Matzoon.	Koumiss.* (Cow's Milk.)	Koumiss. (Cow's Milk.)	Koumiss. (Mare's Milk.)	Kephir.
	P. c.	P. c.	P. c.	P. c.	P. c.
Sp. gr.	0.994	.....	.....	.....	.....
Water	87 79	89 32	88 93	91.53	91.21
Alcohol	0 55	0 76	2 65	1.85	0.75
Carbon dioxide	0 27	0.83	1.03	0.88	.....
Lactic acid	3 01	0.47	0.79	1.01	1.02
Albuminoids	3 29	2. 6	2.03	1.91	3.49
Fat	4.25	2 08	0.85	1.27	1.44
Ash	0 84	.....	0.44	0 29	0.68
Sugar	Trace	4 38	3.11	1.25	2.41

From this table it will be seen these different products are very similar in composition and that the only marked difference of matzoon from the others is found in the more complete transformation of the sugar into acid.

Cod-liver Oil and Chemistry.—According to the *Dietetic and Hygienic Gazette*, in a review of Dr. F. Peckel Möller's recent work entitled as above, the practical conclusion to be drawn from the various researches that have been made with cod-liver oil is that the real value of the remedy lies in the fatty acids which it contains in the form of glycerides. Further, that in order to prevent any loss of virtue, these fatty acids must be preserved absolutely unchanged. The idea that there is any active principle in the oil outside of the glycerides it contains must be discarded as untenable. "When it is remembered that the chief property of cod-liver oil is to build up and strengthen the system, it appears almost ridiculous to look to the infinitesimal fractions of well-known compounds for the explanation of that building-up property. . . . Cod-liver oil is really much more a food substance than a medicinal substance, and to expect it to contain an 'active principle' in the true sense of the term is little less than absurd. Its therapeutic value depends, certainly not on any active principles, but on its remarkable efficiency as a nutritive agent. It is, then, much more rational to look to the newly discovered acids which constitute ninety-five per cent. of the oil as being the probable basis of its therapeutic value."

Diet in Gout.—A. Bogdanoff has studied (*Jour. Med. and Hyg.*) in Professor Obolenski's clinic the influence of animal, mixed and vegetable diet in four patients, three of whom suffered from gout and the fourth from round ulcer of the stomach. The latter patient was given only milk as a food. The mixed diet was found to cause the greatest daily excretion of urine and of uric acid. The specific was between that of the urine in vegetable and that in animal diet. The body-weight increased most under the influence of vegetable diet, diminished under mixed diet and fell greatly under meat diet. In the fourth patient, although the daily quantity of urine was as great, with a slightly acid reaction, the quantity of uric acid was small. The author concludes from these experiments that the diet of gouty persons should not be heavy but nourishing, and tending to increase the number of white blood-corpuscles. For this purpose mixed diet answers best. Pure meat diet acts badly from a psychical standpoint, frequently causing a great antipathy to meat, a tendency to eat little and to drink less, and in this manner diminishing the quantity of urine considerably. Constipation is also often observed.

Tea As a Possible Source of Plumbism.—The source of lead in most cases of plumbism is easily found (*Lancet*). In districts where home-made wine is plentiful, the plumbism can be found due to the glaze of the earthen pots in which the wine stands for some days. In fifteen cases carefully investigated, six were due to the wine. In five the tea contained lead. No other source could be found. In two wine was a possible source, but tea which contained lead was the more probable. In two no cause could be found, but the tea drunk before the illness could not be excluded.

In 1,886 cases of plumbism in Odessa were traced to tea packed in lead-lined chests. The lead may be mechanically rubbed off from the chest lining. The lead lining may be acted on by the tea fermenting inside or from the chest being made of green wood. Carelessness in packing is another cause—traces of copper and chips of lead paper have been found in several small packages of tea. Infusion of tea, upon experiment, has been found to have a powerfully solvent action upon lead. In this way chips of lead paper are a danger. Of twenty-two different kinds of tea, seventeen contained lead; 1.375 mgms. of lead per pound was the smallest amount found and 18 mgms. the highest. The average of all contained 5.462 mgms. per pound. It was most unevenly distributed. Of two packets of the same brand bought at the same time in the same place, one contained 1.6 mgms. per pound, and the other 18 mgms. How far small doses are dangerous it is difficult to state. One case is said to have been poisoned where only 1-357th grain of lead per gallon was found. Water containing 1-20th grain per gallon should be considered dangerous. Tea containing 6 mgms. per pound equals water having 1-25th per gallon. Tea containing such quantities may cause plumbism in susceptible individuals, and would greatly increase the dangers from other sources, as water or home-made wine.

* American koumiss analysis by Wiley.

MISCELLANY.

—Speaking of bicycles. Pat remarked: "Whin I walk I like to have me feet on the ground."

—Sir William Gull used to say that the correct translation of the Greek proverb "Know thyself," was "Test your urine."

—Headache in pregnant women should be regarded with suspicion. It is a frequent symptom of uræmia and threatening eclampsia.

—Dr. Thomas R. Evans states (*Va. Med. Monthly*) that the color of the ear is quite a good index in chloroforming, and can always be observed.

—Sponges, slates and slate pencils are no longer allowed in the public schools of Cambridge, Mass. Paper, pens and pencils have been substituted.

—A bill incorporating the New York Zoological Society and providing for the establishment of a zoological garden in New York has been approved by Governor Morton.

—Caffein has been made by synthesis in the laboratory by E. Fisher and L. Ach. The cost is yet beyond the natural product, but the result is of great scientific importance.

—It is claimed that at least ten per cent. of the patients at the chief dispensary of this city suffer from tea-drunkenness. Its effects are noticed in connection with the nervous system.

—Canned fruits and vegetables should be opened an hour or two before being used. In this way they become richer, as the oxygen of the air, driven off at the time of sealing, is restored to them.

—At the last annual commencement of Georgetown University, Washington, D. C., the degree of LL.D. was conferred on Dr. Ernest Laplace, the Professor of Surgery in the Medical Chirurgical College of Philadelphia.

—The Persians are reported (*Pittsburg Med. Review*) as using powdered cinnamon, in drachm doses, made into a ball by the addition of a little water, for dysentery. This amount is given twice daily, from one to three days.

—Dr. Suckling declares normal liquid cannabis indica, in one to three drop doses, is almost a specific in the insanity of women due to worry and mental shock. It also proves of incalculable value in both mania and melancholia.

—In the trial of a murder case at Tacoma, Wash., the prosecuting attorney asked an expert medical witness if the practice of medicine was an art or a science. The doctor promptly replied, with a smile: "Neither, it is an experiment."

—Gladstone's wonderful vitality and endurance are attributed in great part to the extraordinary versatility of his occupations. It is not hard work that kills men, but the dead level of a single line of business or thought that slowly paralyses the worker.

—Professor Esmarch has invented suspenders made of elastic webbing, which can be quickly detached from the trousers and converted into an Esmarch bandage. Lumbermen, excursionists, etc. (says the *Pacific Med. Journal*), will do well to use the Esmarch suspender.

—According to Prof. Elbridge C. Price, (*Amer. Hom.*) sabal serrulata is a good remedy in pelvic congestion. He uses it in doses of ten drops of the tincture every two hours in peritonitis, and has had successful results even when the disease was complicated with cellulitis.

—At the last meeting of the California State Medical Society, Winslow Anderson, A.M., M.D., M.R.C.P., London, editor of the *Pacific Medical Journal*, was tried, found guilty and solemnly reprimanded for telling a consumptive patient, in answering a letter, that he had "succeeded in curing some cases of consumption."

—Two lines which should find a place in the *vade mecum* of every physician (says the *Medical Brief*) are: "The pain of spine disease is in the stomach," and "the pain of hip disease is in the knee." No prescription for recurring colic should be written unless it is preceded by a careful questioning of the health of the spinal column.

—Music relieves muscular fatigue in man, says Prof. Turchanoff, of St. Petersburg, who has been experimenting on the subject from a purely physiological standpoint. It helps to expel carbonic acid in dogs and increases their consumption of oxygen. It also makes them perspire. He thinks it may be regarded as a serious therapeutic agent.

—The *Medical and Surgical Reporter*, now in its seventh volume, has removed its publishing and editorial offices to the new Constable Building, 109 and 111 Fifth avenue, New York City. The *Reporter* is one of the ablest of our exchanges, and wherever its home it will do good and efficient work as the mouthpiece of a liberal scientific profession.

—Dr. Hunter Maguire, Professor of Surgery in the College of Physicians and Surgeons, Richmond, heartily disapproves of the statement that a man who has had gonorrhœa never gets well; and as for the assertion that this man should never marry—it is preposterous. He has seen thousands of cases get well and remain so. And he might have added: And subsequently had many children.

—The *Homœopathic World* says: (*Am. Hom.*) "It is not too much to say that about 70 per cent. of the cases of toothache that come under our notice may be successfully treated by plantago, while a goodly number of the remaining 30 may be greatly relieved and benefited. Recommends the 2x tincture made from the whole plant, administered in from one drop to three drop doses every half hour for one or two hours, increasing interval as pain decreases."

—Large doses of potassium iodid (*Philadelphia Polyclinic*) against which so many patients rebel, can be readily administered, and are easily borne, if diluted by soda water instead of unmedicated water. A patient now under Dr. Hansell's t eatment for acute iritis of the left eye, complicated with acute optic neuritis of the right eye, complained of disgust and nausea whenever she attempted to take twenty drops of the saturated solution of potassium iodide, even when largely diluted. Syphon soda water being substituted as a menstruum the dose was increased to two hundred drops daily, with perfect satisfaction.

—In testing for sugar in the urine (*Philadelphia Polyclinic*) in the clinic of Dr. S. Solis-Cohen, Boettger's bismuth test is first employed, equal parts of urine and official liquor potassæ, to which a pinch of bismuth subnitrate has been added, being boiled for some minutes in a test tube. Prolonged boiling is necessary to be sure of the correctness of a negative result. If sugar is present a black precipitate of metallic bismuth is deposited. Gray discoloration may occur with substances other than sugar, and while such a change causes the case to be watched and repeated examinations of the urine to be made, it is not considered conclusive of glycosuria, in the absence of confirmatory evidence. If, after prolonged boiling, no change of color occurs, the bismuth subnitrate remaining undecomposed and retaining its whiteness, the conclusion is drawn that sugar is not present, and further tests are not undertaken. If the black deposit is obtained, this, as a rule, means that sugar is present; still, in order to guard against possible errors, Fehling's test with alkaline tartrates and cupric sulphate is then additionally used. If this likewise gives a positive result, the qualitative examination is considered sure and quantitative determination of the amount of sugar is undertaken either by Fehling's method or by fermentation in Einhorn's saccharometer.